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the 1990s, the number of people in the world who are obese has increased by 100% (World Health Organization 1997). In the United States, the prevalence of obesity has increased from 15% in 1980 to 23% in 1994 (Flegal et al. 1994). In the United Kingdom, the prevalence of obesity has increased from 10% in 1980 to 15% in 1994 (Roberts and Smith 1997).

Obesity is a complex condition, with many causes. It is a result of an imbalance between energy intake and energy expenditure. The most common cause of obesity is a combination of a high-calorie diet and a sedentary lifestyle. Other causes include genetic factors, hormonal imbalances, and certain medications. Obesity is a major risk factor for many chronic diseases, including heart disease, diabetes, and cancer. It is also associated with psychological problems, such as depression and low self-esteem.

There are many ways to prevent and treat obesity. The most effective way is to eat a healthy diet and exercise regularly. A healthy diet is one that is low in calories and high in nutrients. It should include a variety of fruits, vegetables, whole grains, and lean proteins. Exercise is also important, as it helps to burn calories and build muscle. There are also many medications and surgical procedures that can be used to treat obesity, but these are usually reserved for severe cases.

Obesity is a global health problem that is becoming increasingly prevalent. It is a result of many factors, including a high-calorie diet, a sedentary lifestyle, and genetic factors. Obesity is a major risk factor for many chronic diseases, and it is also associated with psychological problems. There are many ways to prevent and treat obesity, but the most effective way is to eat a healthy diet and exercise regularly.

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HYGIENE FOR GIRLS.

BY

IRENÆUS P. DAVIS, M. D.

NEW YORK:

D. APPLETON AND COMPANY.

1, 3, AND 5 BOND STREET.

1882.

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TO
J. MARION SIMS, M.D.,
THIS BOOK IS RESPECTFULLY INSCRIBED,
IN THE HOPE THAT IT MAY AID,
IN SOME MEASURE,
TO AVERT FROM THE WOMEN OF TO-MORROW
THE SUFFERING THAT IT IS
HIS GRACIOUS MISSION TO ALLEVIATE FOR THE
WOMEN OF TO-DAY.

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HYGIENE FOR GIRLS.

INTRODUCTION.

HEALTH is not a thing of chance, but is governed by certain fixed laws. These laws are but imperfectly understood, and our knowledge of them is continually progressing. In the present state of medical science a comprehensive study of them is the labor of a life, and should therefore be undertaken only by those who are able and willing to devote their lives to the subject. Necessarily, such individuals constitute but a small portion of mankind. It is to them that all others must look for special instruction as to the preservation of health, and the most probable means of regaining it when it has been lost.

Yet, while the intricacies of the science of

health must be left to those who make that science their province, some of the plainer and simpler laws relating thereto may be understood by any person of ordinary intelligence, at a very small expense of time. It is plainly the duty of every one who can, to acquire this elementary knowledge, as, if acted upon, it will certainly save a great deal of suffering, not only to the individual, but to those with whom the individual comes in contact, and will also greatly augment the power for work and for enjoyment.

Especially is it desirable that girls should have this knowledge, since their future relations in life will associate them more nearly with the physical welfare of others, and their own present and future are attended with more danger from the deplorable effects of ignorance than in the case of their brothers. Many a woman whose childhood was bright with promise endures an after-life of misery because, through a false delicacy, she remained ignorant of her physical nature and requirements, although on all other subjects she may be well-informed; and so at length

she goes to her grave mourning the hard fate that has made existence a burden, and perhaps wondering to what end she was born, when a little knowledge at the proper time would have shown her how to easily avoid those evils that have made her life a wretched failure.

Most of the suffering in this world arises directly from ignorance, and much of it from ignorance that is criminal because unnecessary.

CHAPTER I.

NERVES AND NERVOUSNESS.

THE brain, the spinal cord and the nerves comprise what is known as the nervous system. In general, it may be said that the brain is the part which thinks, feels, and directs. The spinal cord, or spinal marrow, as it is sometimes called, consists of nerve material running through the spine from its commencement at the base of the brain to the lower end. The nerves are soft, whitish cords, running from the brain or spinal cord throughout the various parts of the body. Many people, otherwise intelligent, suppose nerves to be of invisible structure, or too small to be perceived by the unaided senses. The former supposition is incorrect, and the latter is only true of the extremities of nerves after they have become minutely di-

vided in the organs to which they are distributed. At their origin from the spinal brain the different nerves vary in the thickness of the thumb knitting-needle or less. After the brain or spinal cord the nerves like trees, the branches growing small in each division until they finally separate into filaments too small to be seen by the naked eye. These filaments are distributed to all parts of the body. Every little muscular fiber has its nervous supply in this way, and so has each part of every organ. We can not thrust the finest needle into the body at any point without striking some nerve-filaments and thus causing pain. As the nerves spring either from the brain or the spinal cord, and as the spinal cord itself comes directly from the brain, every part of the body is under the influence of the brain, through the means of the nerves. The nervous system has been aptly compared to the electric telegraph, with the brain for central office, the subtile nerve-force for the invisible current, and the nerves themselves

for the conducting wires. But, as in a telegraph system there are many offices, each one having its own battery and connecting link whereby the operator is enabled either to put himself in connection with the entire line, or to send his own messages independently of the central office, so in the nervous system there are many stations or "nerve-centers," as they are called, each of which is capable of communicating impulses received from the brain, or of originating its own impulses and causing acts with which the mind has nothing to do. This secondary and independent exercise of nerve-power is called *reflex action*, because it never occurs except in response to some impression received from without the nerve-center in which the action originates, and is thus, as it were, an impulse conveyed by the nerves from some external point, and reflected by the nerve-center back again through the nerves to the point from which it started. Thus, if the finger comes into contact with flame, an impression is conveyed by the nerves of the finger to a nerve-center situated in the spinal cord, and by that center reflected back

through the same nerves in the form of a motor impulse at the same time that the intelligence of the injury is being communicated through the spinal cord to the brain, so that the finger is withdrawn before we are conscious of suffering, and before the will has time to act. In the same way, if any object approaches too near to the eye, we close the eye, or wink, involuntarily, and, unless prepared for it and able to oppose the impulse by great force of will, we do so even in spite of a strong desire to keep the eye open. This reflex action may occur without any brain, as has been often proved on animals from which the brain has been removed and on animals that have been beheaded. Nearly every one is familiar with the fact that fowls, after their heads are cut off, will flutter and throw themselves about for a considerable time, and this is often regarded as an indication of pain or of some definite purpose on the part of the fowl. It is neither. When the nervous connection with the brain is severed, it is as impossible to feel pain or form a conscious purpose in that part which is sepa-

rated from the brain as it would be to receive telegraphic dispatches at New York from Washington if the wires were broken. The motions are purely reflex, being excited by contact of the surface of the body with the ground, or with other objects. If a fowl after its head is cut off is held carefully by the wings until the motions excited by the first touch have ceased, and is then gently laid upon a bed of down and all currents of air are excluded, it will remain without motion until it resolves into its chemical elements. But, if, soon after becoming quiet, it is touched by the finger or by a stick, or even blown upon, reflex action will be again excited. So it is with people in whom the function of the brain is suspended. In some cases of injury to the spinal cord, in which there is complete loss of communication between the brain and the lower part of the body, patients will kick when the soles of their feet are tickled, although they are entirely unconscious of the touch and also of the motion. In sleep the same thing often occurs. A touch of the hand is sometimes

sufficient to make a sound sleeper change position or even turn completely over.

The brain itself is also subject to reflex action. We know that the brain is capable of several different kinds of action, such as thought, memory, passion, motion of the body, etc. From what we see of the diversity of functions in the brain it will readily be understood that its reflex actions may be much more intricate than those of the spinal cord, which as a nervous center has comparatively limited functions. All voluntary muscular movements originate in the brain. Like the spinal cord, however, the brain is capable also of producing reflex muscular movements, as is shown by the reflex motions of the eye which have been described, the nerves controlling which are derived directly from the brain. But it is capable of many other forms of reflex action, some of them closely related to thought and feeling. Indeed, it is probable that by far the larger proportion of the acts performed by the brain are of a reflex character. Some even go so far as to suppose that there is no

such thing as an original action of the brain, but that all its motions are reflex, being excited by some external cause or by the impression produced by some previous mental act. It is not always easy to decide between direct and reflex actions, yet it is doubtless true that such a difference exists. The spinal cord, too, though far less complex than the brain in its operations, has probably some other forms of reflex action besides that of muscular motion. The study of reflex action opens a very wide field of observation and research. Our purpose is served, however, by the knowledge that reflex action depends on a peculiar nervous influence operating independently of will and sometimes of consciousness, and never operating except in response to some previous action or nervous impression; that it occupies a very large place in the sum of life, and makes much of the happiness and misery of existence, being in some of its manifestations beneficial or absolutely necessary to the maintenance of life, and in others very injurious.

The terms "nerves" and "nervousness"

are often misused and much misunderstood. It is not uncommon to hear people assert of certain others, or of themselves, that they "have no nerves," and many even become indignant at the suggestion that they are in any degree nervous. The idea of such would seem to be that nerves are a hindrance to the cool command of one's faculties, and that to be nervous is to be weak, fanciful, and silly. Yet we know that without nerves one would have no faculties to command, and that some kind and degree of nervous influence enters into every act of our lives. Indeed, we often hear a man of great coolness and self-command spoken of as "a man of nerve," and one who displays a quick and eager energy in all things is frequently described as a nervous person. It is unfortunate that so much confusion exists in regard to these terms, which are thus made to stand both for that state of the nervous system in which the highest health exists and the largest use is possible, and that in which weakness and disorder exist to a painful degree. Even if we limit our use of the

term nervousness to conditions in which there is disorder of nervous action, these conditions are so varied that the term still fails to have the special significance attached to it by many. It is difficult to avoid so using it, but its limitations and extensions should always be kept in view sufficiently to prevent us from doing mental injustice to others or to ourselves in its use.

Nerves are actual things and nervous disorders are real disorders. True, some supposed nervous complaints are imaginary, but the same may be said of all forms of disease. In few other diseases, however, does so much depend on the patient in the way of preventing or removing the disorder as in many of those of a nervous character. The exercise of self-command is a very essential point to the maintenance of a healthy nervous organization, or to the recovery of healthy nervous action when it has been impaired. Nervous disorders arise in large part from some improper or excessive reflex action, and, though such action is involuntary and therefore cannot be directly controlled by the will, yet

often it can be indirectly, either by avoiding those conditions which are liable to excite such reflex action, or by means which will strengthen the general system and enable it to resist the action. For instance, it often happens that a school-girl, either from severe study, or more often from the ill effects of irregularity in the matters of food, sleep, and exercise, from the strain of social dissipation or other fatigues added to her school-work, or from some other neglect of the ordinary rules of healthful living, becomes so far exhausted that her nervous system suffers, and, though by strong force of will she may still regularly perform all the accustomed voluntary acts of mind and body, some of the reflex motions become excessive or perverted. She starts violently at trifles. She is irritable, and slight things annoy or excite her. She may give way to unreasonable fits of laughing or crying. Sometimes she is without cause despondent, and perhaps at other times, equally without cause, exhilarated and vivacious to an unusual degree. In short, she is "nervous." Probably

she has more or less headache, and very likely suffers at times from various unclassified aches and pains or uncomfortable sensations. Now, this is a real condition. She can no more dispel her nervousness directly by force of will than she can in the same way dispel her headache. But indirectly she can control it to a very great degree. She can avoid many of the direct causes of the nervous manifestations. She can not avoid starting at trifles, but by seeking quiet and rest she can avoid many of the trifles that would make her start. She can not always check herself midway in a fit of nervous laughing or crying, but she can usually avoid the approaches to it by an effort of will. She can not, perhaps, when nervously irritable or despondent, make herself amiable and cheerful by willing to be so, but she can withhold herself from the excitements which result in these conditions. Nor will these restraints be of only momentary benefit. All such nervous manifestations increase in force and frequency by their own exercise, and diminish by restraint, so that by avoiding the exciting

causes the nervous conditions themselves will be permanently improved. In many cases, too, and probably in all such cases, the direct force of will has much power in aiding to repress the nervousness, even when it is not sufficient to wholly effect it without the use of the means already suggested. The direct exercise of the will in this way is exceedingly important, for every victory thus gained is a long step toward recovery. Of course, the first thing to be done is to cut off all the causes which, in the first place, led to the nervous condition. Many who are in that condition suppose that some nervous excitement is a necessary stimulant to restore the lost strength, and with this idea indulge in social amusements that are really dissipations, and that are similar in character and effect to the dissipations which first caused the exhaustion. Sometimes these seem at the time beneficial, from the feeling of exhilaration which they produce, but this appearance is deceptive, the reaction being always disastrous. Take an illustration: A girl in this condition finds herself comfortable only when

under the influence of some excitement. It need not be very great, but there must be some slight nervous tension, something to stir the pulse and stimulate the waning energies of the nervous system. In the intervening hours of quiet and relaxation she suffers from a nervous weariness that manifests itself by a feeling of unrest, of *ennui*, of vague dissatisfaction with self and with things in general, sometimes by an aversion to society and a disinclination to effort, especially in one's accustomed employment. To avoid these hours of misery she perhaps occupies all her leisure with severe reading or study on some special topic, or with hard practice of music, drawing, or something similar. More often she seeks diversion at the theatre and ball-room, or in some other form of amusement that has sufficient excitement to distract her mind for a time from herself. In either case the result is much the same. The concentration of the faculties upon the study or amusement causes a pleasurable thrill, perhaps all the keener because of the irritable condition of the nerves, but for that very

reason unhealthful, and this lasts until the attention is turned away from the subject, or until exhaustion becomes so great that further concentration is impossible, and then comes the reaction in the shape of a depression of the nervous forces and of the entire powers of the individual, in proportion to the degree of exhilaration which has been experienced. Relief from the painful effect of this depression is sought in a new round of mental or social dissipation, with similar and accumulating result; and so matters go on from bad to worse, until at length the girl either dies from some incidental disease that would have had little effect upon her had she not been in an exhausted condition, or she becomes prematurely old and haggard, unfit for society, a burden to her friends, and a plague to herself. Instead of such a course, one in which rest is the main feature should be pursued. By this it is not meant that one should spend most of the time in bed, or that all social intercourse and all useful or pleasurable employment should be interdicted. It is not always, and perhaps

not generally, necessary to interrupt the regular course of school studies, though sometimes it is, and it is very important that neither should the multiplicity of studies be sufficient to confuse the mind, nor should the attention be fixed upon any one study, at any one time, long enough to produce exhaustion or great fatigue of mind or body. Social intercourse in the family or among pleasant friends and acquaintances is desirable; but balls, parties, theatrical entertainments, and all amusements or occupations that cause nervous excitement or necessitate late hours, should be strictly avoided. Irregular hours are especially to be guarded against. Change of scene and of associations is frequently beneficial by providing subjects for mental and physical occupation that interest by their novelty, and yet are not sufficiently engrossing to fatigue the faculties, but such change is never beneficial when it involves continuous, fatiguing travel, or the whirl of a watering-place in summer and of city society in winter.

Another form of nervousness, not always

recognized as such, is of an emotional character, and depends rather on constitution and habit than on any general impairment of health and strength. Many persons of not unkindly disposition and generally fair health yet suffer from a nervous irascibility of temper. It seems as if the friction of daily happenings was exaggerated for them, and small things rasp painfully upon their feelings, rendering them querulous and unreasonable, uncomfortable themselves and disagreeable to others. Or it may be that on slight occasion they burst into uncontrollable passion, saying and doing things that are absurd as well as wicked, repenting perhaps almost immediately, but none the less repeating the offense on the very next occasion. This state of things is not commonly regarded as a disorder of health, yet it is certainly a departure from that sound mind in a sound body which constitutes perfect health. Many conditions come to be well-marked diseases that in their beginnings are but vicious habits, and indeed every habit which in its exercise involves a change for the worse in some nervous or other

function must be considered, in so far, a departure from health. Perfect health has relation to the moral as well as to the mental and physical functions. Notwithstanding this, the responsibility for such outbreaks of temper remains, for the moral sense is by no means lost, and, moreover, this is a form of nervousness which is more readily controlled than many others. Each indulgence increases it, but if a constant watch is kept upon the temper, and a strong effort at repression made, improvement will be certain and rapid. Above all, it is important to avoid giving voluntary expression in any way to the irritated feeling, and this can very readily be done if one really desires it. Some take much credit to themselves for "speaking what they think," as they term it, but really for speaking what they feel. This is altogether wrong. It is a mistake to suppose that anger is lessened by "having it out," or that "it is better to say it than to keep it to one's self." Every strong outburst of emotion is followed by some degree of reaction, which, in the case of anger, may for a time make it seem as if

the outburst had done good in clearing away the clouds of ill-feeling, as a discharge of electricity may remove the mists from the air, but this benefit is only apparent and temporary, and the outburst has in fact prepared the way for a more violent one on the next opportunity. The feeling of vexation or anger is involuntary and reflex. Words, on the contrary, are voluntary, and thoughts, strictly speaking, are also. No matter how "passionate" or nervously irritable one may be, these intrinsic distinctions remain. We can, then, control our words and thoughts, and, by controlling these, we can remove from our minds in large part the impressions that give rise to the feeling of vexation. It is on this principle that it has been said that an angry person should count ten before speaking, and if very angry, a hundred. If we give voluntary expression to the angry feeling in words, or even in thought, every such expression acts as a renewed impression on the brain to maintain and intensify the angry feeling until the capacity of the emotion for exercise is for the time exhausted, so that it is no figure of

speech to describe a person in such circumstances as "nursing his wrath to keep it warm."

The same rules apply to that lesser degree of irritation which results in fretfulness or general "crossness." Whether it is a creaking door, an idle question, or any other petty annoyance that brings the frown to our brow and the snarl to our lips, if we remark, audibly or mentally, on every repetition of it, the frown will surely grow deeper and the snarl more habitual, while if we always let the annoyance pass with as little speech or thought as possible, resolutely repressing the snarl and smoothing out the frown, we shall soon find that it has ceased to affect us as an annoyance. We shall find that we have grown less nervous, and our friends will find that we have grown better tempered.

A form of nervousness that is often derided, but is very distressing to those who are afflicted by it, is manifested by fear or dread of certain things. This is not the reasonable fear of things known to be unsafe, which may be a mere matter of prudence, nor is it a cow-

ardly shrinking from danger, but it is an unreasoning dread with which the question of danger has really little or nothing to do.

Often this dread is felt for some object that is entirely harmless, and is known to be so by the person dreading it. Again, the object of dread may be in itself more or less dangerous, yet, that the feeling of dread is not caused by the actual danger, may be shown in the fact that the person subject to it is perfectly courageous in the presence of all other dangers. So, many persons of undoubted bravery are beside themselves with fear at sight of a mouse. Others have the same uncontrollable terror of a cat or of some other animal. It is impossible for them to give any reason for their dread. They do not commonly fear that the object of it will really hurt them, but its presence excites in them an intense horror that reason and will are powerless against because it is not born of reason or will, being purely reflex in its operation. There is no more reason apparent why a strong and brave man, or even a girl neither very strong nor very brave, should

tremble and turn pale at sight of a little mouse that one slight blow would crush out of existence, than there is why either of them should laugh immoderately if a finger be drawn over the ribs or across the sole of the foot. In either case there is a peculiar nervous susceptibility to a certain form of reflex action. In one case the presence of the mouse causes a nervous sensation of terror. In the other case the motion of the finger causes a nervous sensation of tickling. Though the exciting causes as well as the effects are different, the two operations are very similar; and as, in the case of the tickling, if the will is strong enough to resist the prompting to laugh, and keep the body quiet, the susceptibility to tickling will be much lessened, and may in a little time be lost altogether, so in the other case, if the will is able to repress the manifestation of terror, the susceptibility to terror from such cause will be lessened and may wholly disappear. On the contrary, if the will can not or does not repress the manifestation of terror, the susceptibility to the terror will grow, so that every time, for

example, one screams or starts at sight of a mouse or other object of nervous dread, that dread is increased for the future, just as every tickling that can not be resisted renders one more ticklish. For this reason, it is cruel as well as unwise to force on the attention of persons who have this nervous weakness the object of their dread, especially when it is done suddenly so that they are taken unawares, or when the object is brought into personal contact with them, or a pretense is made of so doing. Such things are often done thoughtlessly by friends or acquaintances who find pleasure in laughing at the distress that seems to them but a foolish fear, or sometimes with good intentions, in the erroneous supposition that all that is necessary to cure the dread is familiarity with its cause. Very serious results have sometimes followed such acts.

The same kind of nervous dread often has for its object other things than those just mentioned. In fact, it may be caused by any object, animate or inanimate, or by the idea of an object, as well as by the thing

itself. The poet Gray, for instance, is said to have suffered acutely from a nervous dread of fire, and while in college his life was made miserable by fellow-students, who knew of his weakness, and amused themselves by giving false alarms of fire under his window at night and in other ways playing upon his fear.

There is, however, a distinction to be made between this unavoidable nervous dread and simple cowardice or affectation of fear, which is often mistaken for it by the person affected. A cow or a spider may excite in some persons a nervous horror, but in a far larger number of persons the fear of the cow is a reasoning fear of its horns and hoofs, originating in well-grounded knowledge of the animal's power and ignorance of its docility, or in cowardly distrust of the person's superiority; while the dread of the spider is either a dislike of its ungainly shape and objectionable habits, an ill-founded belief that it is venomous, or an affectation of what is fancied to be delicate and lady-like.

There are many forms of nervousness more or less closely allied to that which has just

been considered. Even the inferior animals are subject to some of them. It is said that the elephant will tremble with fright at sight of a mouse, and monkeys shriek and chatter with terror at any slight rustling sound occurring at night, although in daylight they would take no notice of it. Very similar occurrences are often observed among our domestic animals and those which in a state of nature make their dwellings near men. The rage of bulls and turkey-cocks on seeing a red cloth flutter and the alarm of chickens at seeing a bird or a piece of paper fly through the air above them are familiar to most persons. Many dogs howl dismally whenever they see the full moon, and others do the same on hearing thunder or the report of fire-arms, the tolling of a bell, or certain chords of a piano or of some other musical instrument.

Mice and some other animals are sometimes strangely influenced by musical sounds, in a manner quite opposite to their common habits and instincts. In some cases the influence seems to be an agreeable one, and in others the reverse. Many instances are re-

lated of naturally shy animals being drawn from their hiding-places by the strains of a flute or other musical instrument, and remaining unconscious of danger, and in a state of apparent ecstasy, during the continuance of the music. On the other hand, bats are said to suffer acutely from the strains of a violin; and a recent writer* gives the following account of the effect produced on these animals by the sound of another instrument: "The upper story of the Salzburg Acropolis is infested with innumerable horseshoe bats, and the steward often uses them for a curious experiment. He claps one into a wire cage, puts the cage on the top of a desk, and on a lower shelf of the desk a Hackbrett, or Styrian zither. At every twang of the zither the bat will start as if a fine needle had pierced its body, and a prolonged performance will throw it into a fit, a convulsive twitching of the whole flying membrane."

In some of these instances we can see a

* Felix L. Oswald, in "Lippincott's Magazine," for February 1882. Several illustrations in this chapter are on the authority of the same author.

cause, or at least a reason, for the nervous manifestation, while in others we can not. We are told that the elephant has good ground for his fear of the mouse, in the fact that the small animal is liable to make its way into the nostril of the larger one, thereby, of course, causing intense suffering and perhaps danger to life. But it does not seem likely that the elephant should know this fact if he has never experienced it, and, not knowing it, his terror of the mouse is inexplicable, unless we suppose that the experience of past generations of elephants has impressed his nervous system with an instinctive horror of mice.

That an animal may thus blindly inherit some peculiar nervous susceptibility as a result of the experience of many generations of its ancestors, is abundantly proved. A familiar illustration of it is found among dogs. Pointers, setters, hounds, etc., are varieties of dogs that for many generations have been trained to hunt certain animals. Puppies of any one of these varieties show great nervous excitement at the first sight or smell of an animal of the particular kind that their

ancestors have hunted, although the puppies have as yet no knowledge of their true relations to this animal, and must themselves be carefully trained before they can properly hunt it. On the same principle it has been suggested that the nervousness of monkeys at night is probably due to the fact that, as these animals can not see in the dark, they are, in their native forests, quite at the mercy of night-prowling beasts of prey, and the frequent visits of such nocturnal enemies, amid rustling leaves and crackling branches, to successive generations of monkeys, have developed in the whole monkey race instinctive night-terrors which the slightest rustling or crackling sound will awaken to shuddering and shrieking expression, though the terrified creatures do not seem to have any idea of a specific danger, but rather to be like children cowering and crying in the dark. We do not know why moonlight or a tolling bell should make a dog howl, why a mouse should be entranced by the music of a flute, or a bat thrown into convulsions by the sound of a zither, and the same is true of many other

forms of nervousness that animals are subject to. It may be that explanations will be found for these, not dissimilar from the explanations proposed in the case of the elephant and that of the monkey, and it may be quite otherwise. We can as yet see only the immediate cause and the effect, and, whatever may be the remote cause, so far as we can see, the phenomena are very similar in all these forms of nervousness. We find a variety of such forms affecting man in much the same way as they do the lower animals.

The dread of darkness common to children—and which, by-the-way, is not confined to children—has already been alluded to. It is not simple cowardice, although it may have a greater influence on cowards than on those who are naturally courageous. Neither is it probably due to stories of night-horrors heard or read by children, as many persons have supposed, though these undoubtedly aggravate it. It is a form of nervousness like those we have been considering. Of course it is very inconvenient and undesirable, and fortunately it can nearly always be overcome.

Not, however, by violent means. To force a child who is afraid of the dark to go alone into a dark room while in a state of nervous excitement, and especially to terrify such a child with weird tales and suggestions, or with unexpected noises and movements made under cover of darkness, is cruel and certain to increase its nervousness. Self-control in such circumstances is hardly possible, and self-control is the prime necessity in overcoming this and similar forms of nervousness.

Familiarity with the object of dread is essential to effect this end, but this familiarity must be gained in a manner that will not of itself deepen the impression of dread. In other words, if we are to be cured of fearing the dark, we must become accustomed to darkness in circumstances that will not associate in our minds other unpleasant or terrifying ideas with that of darkness. We should avoid getting our imaginations excited by ghost-stories or other horrors at any time, and especially just before going into the dark. On the contrary, we should, so far as possible, before retiring to a dark room, fill the mind

with wholesome and practical ideas by cheerful conversation or reading. If it can be avoided, we should never delay such retirement until we are very weary in either mind or body, because such a condition unfits us to exercise self-control, and favors the formation of weird mental images. We should, if about to sleep in a strange room, take careful note of every part of it, and the position of doors, windows, furniture, etc., before extinguishing the light, not that we are actually safer for making this observation, but because we will then have a sense of controlling our surroundings and not of being controlled by them, and because we will be better able to recognize individual objects in the dim light of night, or of dawn, and to avoid seeing in them unreal and grotesque shapes. By such means as these, aided by reason and will, even very timid or nervous persons can soon rid themselves of a dread of darkness. Wanting the knowledge or the will to make a proper effort to this end, some girls grow to womanhood with the dread fastened upon them, to the great annoyance of themselves and their

friends, perhaps so far yielding to it as to keep a light always burning in their rooms at night, a practice on many accounts undesirable except in sickness.

We may notice here the not uncommon practice of looking under the bed before retiring. In itself it is a trivial thing, yet such trivial things largely affect one's comfort and usefulness. The very habit of looking keeps alive a nervous fear that there may be something to look for, expressed, if occasionally the looking has been forgotten until after the light is put out, by the thought, "I haven't looked under the bed! What if there should be——?" While, then, it is better to look than to suffer continually from such a fear, yet if we have sufficient self-control to refrain from looking we shall probably find, after a short time, that we have ceased to feel the need of looking, that our consciousness has received what reason has long told us, viz., that our resting-place is secure; in short, that we are freed from a petty nervous tyranny, and are by so much stronger, more self-centered, and happier.

Many people are affected by certain sounds in much the same manner as are some of the animals we have spoken of. The sound of filing a saw, the creak of a rusty hinge, and various other noises, produce in many an unpleasant thrill, apparently in the nerves of the teeth, which is commonly described as "setting the teeth on edge." Again, certain musical instruments, or sometimes certain notes on almost any musical instrument, affect some persons in peculiar ways, in some cases causing nausea, in others producing a curious, thrilling sensation that may be either pleasant or unpleasant, or may have elements of both pleasure and pain; and so on.

Some persons are sensitive in a similar way to certain colors or shades of color, to odors, or to impressions conveyed by the sense of touch. Indeed, nearly every one feels a nervous shiver on touching the down of a green peach or stroking velvet the wrong way, and there are many other instances in which the sense of touch produces a peculiar effect on the nervous system of some individuals. The smell of tobacco makes some persons deathly sick.

Others are affected in the same way by the smell of roses, of strawberries, melons, apples, cheese, or some one of a score of other common articles of food. There is scarcely a flower, fruit, or other odorous substance known, that does not have this effect on some. Manufactured perfumes are especially apt to produce it. On the other hand, the same odors produce on the nerves of some persons an effect which is not unpleasant, or which is unpleasant only in its intensity. These peculiar nervous effects, whether painful or pleasant, do not bear any close relation to the annoyance or gratification felt by the sense of smell. That is to say, one may like the smell of roses, for example, and yet faint at it; or one may dislike the smell of musk, and yet experience a certain kind of nervous delight in it. Probably the nervous susceptibility to colors among mankind is less common than that to odors, at least as regards any great degree of its manifestation, though in a general way nearly every one is subject to the cheering and depressing influences of various colors and their combinations, even

without understanding the reasons, and here and there will be found an individual on whose nervous organization certain colors have a very remarkable influence.

Moonlight, water flowing strongly, or deep water resting in shadow, the silence of a great forest, or the sound of wind rushing through its branches, and many other phenomena of nature, have a marked influence on some nervous organizations. In some they produce a feeling of exaltation, in others one of sadness, and again they excite feelings that are not easily described, but that involve a kind of awed fascination, a consciousness of profound power affecting us or which may affect us, yet incomprehensible and beyond our control.

Perhaps this sense of subjection to a mysterious power is the principal cause of the influence exerted upon the nerves by such natural phenomena, and indeed it is probable that something like this is a large element in nearly all the nervous influences just considered as belonging to many odors, sounds, etc. Generally we may free ourselves from any of these forms of nervousness by becom-

ing accustomed to the objects which excite it. Familiarity with the object, whether it be a sight, sound, odor, or anything else, soon enables us to regard it without the feeling that it possesses and controls our being, and, as soon as this point is reached, although the object may still be agreeable or otherwise to our senses, it no longer makes us nervous, because, instead of being mastered by it, we now master it. This mastery is sooner effected if our familiarity with the object is associated in some way with practical service or use. Thus, if we could utilize Niagara Falls for the running of a cotton-mill, we would far sooner learn to stand beside it with unshaken nerves than if we merely accustom ourselves to look upon it with wonder and admiration. So, if one who is nervously affected by the odor of certain fruits can exercise sufficient self-control to become engaged in the business of raising or dealing in such fruits, the nervous influence will disappear more readily than if they are handled merely for the sake of familiarity.

On the other hand, if on each occasion of our coming into contact with the object we yield to its peculiar influence, either through inclination or inability to avoid yielding, we strengthen the bonds of that influence and deepen its effect. Therefore, in such a case, if the influence is an undesirable one, as nearly all such influences are, we will do wisely in avoiding the cause of it as far as we possibly can. On this principle those who find that they are excited to nervous melancholy by certain scenes or associations, and yet are strongly fascinated by such scenes or associations, should carefully avoid them. It matters not whether that which exercises such a growing mastery over us is the grave of a friend or only the reflection of the moon from a frog-pond, or any other object, if we continue to place ourselves under its spell we are in danger of hopelessly impairing our nervous organizations, if not of adding to the list of tragedies in life or in death that have grown out of such influences.

CHAPTER II.

HABIT AND ASSOCIATION.

THE influence of habit upon our lives is so great that man is often called a machine, and many of our acts which at first are the result of choice, become, after a time, involuntary and mechanical. We do an act for the first time, and perhaps find some difficulty in doing it, but, as a matter of reason and choice, and by a strong effort of will, the difficulty is overcome. On some later occasion the act is repeated, still by the deliberate exercise of will, but with less difficulty than before. As the act is repeated again and again, the difficulty disappears, and we come at length to do it without conscious effort and with little consideration; and finally, whenever the circumstances recur in which we

have grown accustomed to doing the act, we perform it at once without stopping to choose or think about it, and even, it may be, in spite of a new-formed purpose not to do it.

This growth of habit occurs in the same way, whether the act to which it relates is good or bad, or without moral quality. Take an example. We hear some one pronounce a word in a very absurd way, and are amused at it. When we next have occasion to utter that word, the blunder connected with it touches our sense of humor, and we sportively adopt the false pronunciation. It may be a little difficult for us to produce exactly the grotesque sound which amused us, but by repeated trials we succeed in rolling the barbarism from our tongue as readily as our former correct utterance. After a time, however, we cease to find the blunder amusing, or our better judgment and the fear of being misunderstood warn us to desist from its use. But now, to our chagrin, we are apt to find that a habit has been formed, so that, when we attempt to use the proper pronunciation, the improper one comes instead. It may be

that we now frequently use the latter unconsciously when we suppose we have used the former, or it may be that we are painfully conscious of the tripping tongue, and are obliged to pause and make a decided effort to speak the word correctly. The tongue seems to have acquired a grotesque twist that makes itself felt whenever we come to that word, and renders it difficult to turn the word off in proper shape. And this is the fact. There is no deformity of the tongue, no contortion visible to the eye, or apparent to any physical means of perception. It is not changed in form or texture. But there is a twist in the exercise of its functions. It has developed a peculiar reflex irritability, a power, and, with the power, a necessity, of responding in a particular way to a certain impression. That impression is produced by the idea of the word, through a mental association of this idea with the blunder, so that, whenever the idea is present in the mind, the nerves impel the tongue, without our will and perhaps without our knowledge, to commit the blunder.

Habit, then, is a form of reflex action, and the act which is performed by habit is not strictly a voluntary act, although it may be performed by voluntary organs, and as a result of a will to perform it. Of this character is the act by which a musician strikes the keys of an instrument in accordance with the written or printed notes. By long practice the fingers have become so educated that the moment the eye glances at any note they strike the corresponding key. This is in accordance with the will of the musician, but the operation of that will through the ordinary channels of thought and voluntary motion would be too slow for the purpose. Before this habit of the fingers is fully developed, the motion must come through these channels, slowly and laboriously. Even then the fingers may be quite as capable of making the proper movements, but the effort of deciding those movements in the mind and directing them in the fingers requires so much time that their succession is necessarily slow or interrupted. It is only when, by many repetitions, the sight of certain figures becomes so

firmly associated with certain movements of the fingers that the one instantly calls forth the other without the intervention of volition, that the playing becomes easy and rapid.

The reflex character of habit is a little differently and perhaps more plainly illustrated in those who play by ear. They begin a tune which they have heard played or sung, and, though they may have no accurate knowledge of the notes in it or of notes at all, the first note, when sounded, prompts them to strike the next, and so on to the end. This is effected through the power of association. There is no logical reason why, in a certain tune, B should follow A, but there is the fact that it does follow. We may not be aware of this fact, and, although familiar with the tune, may be quite unable to tell another person or ourself, without trial, what note should be struck after A, but on sounding A our finger, by an instinctive motion, falls upon B. We may even have forgotten a part of the tune, and be quite unable to recall it to mind until we undertake to play it, and then the playing of a

few notes immediately preceding the forgotten passage causes us, involuntarily, to strike the notes of that passage, and perhaps only after we have thus played it are we able to recall it to mind. So we see that habit depends upon association, and is very similar, indeed, to memory. It has been aptly called a physical memory, and the analogy between this and the ideal memory is so close that it is often difficult to draw the line between them.

Habit affects not only words and other acts, but thoughts, beliefs, and emotions. The familiar sarcasm on any notorious liar, that "he has told the story so many times that he believes it himself," has solid truth for a foundation. The frequent repetition of a falsehood, especially if with the intent to make others believe it, at length makes such an impression on the narrator's consciousness that it has to him the effect of truth. In this way it sometimes happens that a person will tell a lie, knowing it to be a lie, and afterward, having frequent occasion to repeat it for the saving of his credit, will come so

fully to believe in it that he would stake his life, his reputation, and his final salvation on its verity. In this state of mind one may swear to a lie in a court of law without being guilty of willful perjury, although legally guilty of it and morally responsible for the origin of the lie. The falsification, which at first was a voluntary motion, has finally produced a reflex action, through which, whenever it is presented to the consciousness, it must induce belief. There is a form of disease in which this same reflex action of the consciousness is induced without the previous operation of long habit, but with all its effect, so that the patient tells the most absurd and impossible lies with no apparent object, but really because she (women are much more liable to the disease than men) can not help it, and because the lies are truth to her consciousness. Again, it is known to all who have considered the subject that the consciousness may be so developed by habit that, on the one hand, we will give ready credence to any assertion that is brought to it, however strange or improbable, or, on the other

hand, we will doubt everything that we see, and trust no one without very particular proof. Belief is a matter of personal consciousness, and may or may not have a reasonable basis. It is not, like thought or speech, under the direct control of the will, but, through the force of habit, in the manner that has been indicated, it may be largely affected by the will.

Hence, it is truly said that all men are apt to believe what is to their interest. I may wish to believe that there is no life beyond the present one. But my habit from infancy has been to believe otherwise. Philosophy teaches me that there must be, revelation tells me that there is, a hereafter. I can not believe what I wish, so long as I feel it to be false. My consciousness, my sense of knowing, forces me, even against my will, to believe in the future life. Yet, if my present life is such that I have strong reason for wishing that there may be none hereafter, I will avoid, so far as possible, thinking of the future life as a reality—will exclude from my mind those thoughts that prove that reality to my consciousness. In-

stead, I will welcome thoughts of what might be if there were no future life. The repetition of such thoughts encourages a feeling that possibly there may be none, and now my consciousness, aided by desire, begins to receive the impression of such arguments as I can find against the future life. So, at last, through the indirect action of the will in forming a habit of thought or of feeling, I come to have a fixed belief, a consciousness, of that which I wish, even though it be utterly false, and though I was once fully assured of its falsity. Something like this occurs whenever, on any subject, a belief is adopted in consequence of a desire to hold that belief, and not from a dispassionate balancing of evidence.

It is true, of course, that the influence of the will in forming a habit of thought that shall induce belief may be for good, as well as for evil, and right as well as wrong beliefs may be adopted in this way. The operation, too, may be quite a rapid one, and, the more we permit our wishes to influence our beliefs, the more easily and rapidly such changes will be

effected ; so that it is not very uncommon to find persons who have acquired a habit of believing with remarkable facility almost everything that appears to their interest, and of disbelieving, with equal readiness, whatever is contrary to their wishes. It requires, indeed, much self-culture to avoid this method of coming to conclusions, and perhaps no one is wholly free from it. It is the curse of conversation and of discussion, the great obstacle to the advance of truth in all departments of thought. Women are, in the aggregate, more under its influence than men, because fewer women than men acquire the habit of forming beliefs by the method of presenting to their consciousness facts wherever found, independently of their wishes and predilections. For this, too, is a habit, and can only be attained by long and careful cultivation. Girls are too apt to consider such mental discipline outside of their province—something for which they are not by nature adapted, and which is not needful for them to acquire. Far better would it be for them, and inestimably better for the next genera-

tion, if they could be convinced to the contrary.

It is scarcely necessary to speak of the influence of habit on the emotions, beyond what has been said of it in connection with nervousness. We know that a peaceable person may become quarrelsome, and a quarrelsome person peaceable; that love, hate, anger, and all other emotions may be developed beyond any control, or confined within strict limits, simply through habit. The formation of the habit in these cases is according to precisely the same principles as in those that have been described. So in regard to habits of thought. True thought, as distinguished from mere ideas, is always a voluntary motion of the mind, but the frequency of thought, the subjects upon which it is chiefly exercised, and the general tone of it, are things of habit.

All those processes which belong strictly to the animal life, and are not directly connected with either will or consciousness, are regulated by habit. Thus, the stomach becomes accustomed to receiving food at certain hours, and

when those hours arrive hunger is felt, and the digestive organs are in readiness for their work; while if food is taken at other times it is often digested imperfectly, or not at all. The quantity of food required, or which may be digested, is, to some extent, a matter of habit, and so is the kind. The organs of secretion and excretion are all subject to the law of habit as to the amount of work they perform, and the time or circumstances of its performance. One would hardly suppose, for example, if the facts were not known, that sweating is largely a matter of habit, yet so it is. Glass-blowers, iron-founders, and others who work in great heat, are enabled to bear without suffering a temperature that would soon kill an unaccustomed person, because they have acquired a habit of perspiring enormously, sometimes several quarts in an hour, when exposed to a very high temperature, and the perspiration carries off the heat from their bodies. Every organ and function of the body, in short, is under this law.

So we see that, in the sum of life, a very large amount is to be set down to the ac-

count of habit. There is, indeed, a vast advantage to us in this, for we are thereby enabled to so regulate our lives in all particulars as to derive the largest and best results, whether of pleasure or other good, with the least effort. Probably more than nine tenths of all that we think, say, and do, is the result of habit, and without this aid to action our lives would be full of wearing effort, yet very barren of result. Yet habit also involves great danger of loss. So easily is it formed, and so closely does it bind us, that we are in constant danger of losing, through unfortunate habits, much of the good of life. We have seen how closely our moral, mental, and physical functions are united, and how very dependent they are upon one another for healthy exercise. It becomes, then, of the utmost importance, considered simply as a measure of health, that we should look carefully to the habits of all these different functions, encouraging such habits as are beneficial, and checking all those that have in any way an evil tendency.

Our responsibility in this matter relates

not only to ourselves, but, perhaps even in a greater degree, to those who shall come after us. Those for whom this is written will be the mothers of the next generation. The thoughts which they are now thinking, the words they are speaking, the acts they are doing, the regularity or irregularity with which their various organs are performing their offices, will produce habits in the children they will bear five, ten, twenty, or thirty years hence. And these inherited habits are often stronger than those which are formed after birth by the direct acts of the individual. For many months at the beginning of a human life there is no power of voluntary motion in either brain or body. All the operations are reflex, and have their origin in some influence derived from the parents, and especially from the mother. So the reflex character of the child—its inborn habits of mind and body—is determined before it has the power of choosing its acts, and that which in the parent would be a second nature is inherited by the child as an original nature.

In this way many a child has been born a

drunkard. It may be that neither parent has ever been drunk, but one or both have practiced the drinking of intoxicating liquors to some extent. Every repetition of this, as of every act, produces a deepening impression, but the habit thus formed may be restrained in the parent by reason and will. There are at first no such restraining influences in the child, but the reflex impression made on the parent is transmitted to it, and so it is born with a taste which it has no power to control.

And in the same way many a child has been born a liar because the parent has practiced a disregard for truth ; many a child has been born a sloven because the parent has practiced a disorderly habit ; many a child has been born a dunce because the parent has neglected to form habits of study and observation ; many a child has been born a tale-bearer because the parent has indulged in small gossip about neighbors ; many a child has been born a blasphemer because the parent has practiced irreverence of thought, word, or manner ; many a child has been born to an inheritance of physical misery because

the parent has formed habits of mind or body that interfere with the healthy exercise of the various organs, and this even though the health of the parent may not have been very seriously affected thereby. There is not a command in the decalogue that children are not made to break, not a grace of mind nor a power of body that they are not made to suffer the want of, through the transmission of habit from parents.

And this transmission occurs whether the impressions destined to produce the habit occur in the person of the parent shortly before the birth of the child, or many years before, so that parents often see in their children good or bad habits for which they themselves laid the foundation in their own childhood. Habits may even be transmitted to the third or fourth generation, and that even when they have not appeared in the intervening ones. So the habits that we are now forming will add to the happiness or misery of the world a hundred years from now. In this view, it is wholly incorrect to say, as is often said, that the manner in which we live "will make

no difference in a hundred years." Indeed, an inherited habit is very apt to be strengthened by practice, and by the same practice to be transmitted to the next generation, by that to the next, and so on, indefinitely; hence, our habits will bear fruit in the physical, mental, and moral health of untold ages if the world shall endure so long. Such considerations have little weight with many young people, because it does not seem possible to them that their relations with the world can so change that, instead of being children, they shall come to be parents. Yet this is possible to all, probable of most. They would hardly forgive their parents if they found themselves diseased and degraded in consequence of the indolence or self-indulgence of those parents in former years, yet at their age the parents felt as they do now about the possibilities and responsibilities of later life.

Habits formed in early life, however, and discontinued before the time of parentage, are not nearly so liable to be transmitted to posterity as those that are continued.

As the formation and exercise of habit depend entirely upon the power of association, its discontinuance can only be effected by breaking the association or by removing the object or impression through which the association is effected. Take, for example, the habit of the fingers in playing a musical instrument. That habit is exercised, we found, through the association of certain figures or sounds with certain movements of the fingers. If for a long time we read no music, the impression made by the notes becomes weakened, and finally lost, so that we shall be unable to play from note until we have again educated our fingers. Or, if we have no instrument to play on, even though we continue to read notes, as in singing, the association of the notes with the movements of the fingers finally becomes broken with the same result.

All our other habits are suppressed in the same way. We can not control a strong habit by direct force of will so long as all the conditions exist which call that habit into exercise, but we can control some of those conditions, and thus break the association

which constitutes the habit. Whatever the habit is, then, which we wish to break, it is wise to avoid, as strictly as we can, all scenes, companions, occupations, words, and thoughts that are in any way associated with its exercise, being careful to fill their places with others that are dissimilar.

Miss Mabel Chatterbox has acquired a habit of gossip about her acquaintances. She does not mean to misrepresent or injure them, and does not know that she does so, yet she is in the direct way to transform her mind into the same ghoul-like thing that does service in Mrs. Scandalmonger's cranium. That cordially hated old woman is not by nature particularly ill-disposed. At Mabel's age she was, like the latter, a merry, romping girl, a favorite in society because she was a pleasant talker and well informed as to society news. But the habit of repeating and commenting on items of society news, and especially such items as have some sinister aspect, has grown upon her until it has completely warped her sympathies and her judgment. Even now she does not speak evil of people from a de-

sire to injure them, or pleasure in making things worse than they are, though both these motives are commonly attributed to her. She is not really conscious, in fact, that she maligns her neighbors, and is as virtuously indignant at the faults and foibles which she honestly thinks are apparent in them as they are at her slanderous tongue. From long-continued noting of the ill-considered acts and evil motives in the world, she has developed so strong a habit of taking every suspicion for a fact and hanging suspicion wherever there is a point that it will hang on, that a shadow is to her real substance, and the very sunlight but a cover to some dark mystery.

Now, if some good angel shall show Miss Mabel that her gossiping habit tends surely in this direction, she will wish to remedy it. With this view, as well as because tale-bearing appears unlovely in others, she will probably avoid the society of Mrs. Scandalmonger. But this will help her but little, for, though the example of others may convince us of the advantage or disadvantage of certain habits, it has less direct influence than we are apt to

suppose in forming the habits within us, and neither example nor the absence of it will of itself break a habit that we have already formed.

The companions, then, that Miss Mabel should especially avoid are those that listen complacently to her gossip, and by that very complacency encourage in her a feeling of superiority to the fellow-mortals to whom the ridiculous, or unfortunate, or otherwise remarkable things have happened that are the subjects of her comments. Then if she sees young Mr. Goodman walk the length of a street with old Miss Spinster, instead of allowing herself to think that "that old maid" is making an effort to monopolize Mr. Goodman's society, or that at least "it looks a little queer," she should regard it only in the light of a simple courtesy on the part of a young gentleman to a very worthy lady, and so dismiss it from her mind. And if she hears that Harry Ledger is short in his accounts, and, though his employer will not prosecute him, there is a probability of his leaving town, let her not permit her mind to be influenced by

that lying old proverb that "where there is much smoke there must be some fire," nor even direct her mental vision to circumstances that may tend to establish the fact of Harry's guilt, and so add another to the long list of instances that already impress upon her consciousness the idea of human meanness in general and the necessity of watching people, but rather let her remember that Harry's employer has offered to retain him in his present position, and so be impressed with the fact that there are such things among men as generosity and open-hearted trust. If she will carry out this principle of thinking in connection with all the items of social news that come to her, she will have broken a link in the chain by which the habit of evil-speaking depends. Moreover, she will have formed mental associations through which every unexplained act of her neighbors and every partial report of their doings will present itself to her consciousness in an unprejudiced and rationally charitable light; and, although this charitable frame of mind will not in the least disqualify her to form just estimates of right

acts and motives when they are fully set before her, it will prevent her from lightly speaking evil of any, for she will think no evil.

Just in the same way are physical habits changed. If I have formed a habit of going to bed and to sleep at midnight, it will do me no good to go to bed at ten o'clock until I have changed that habit; and this change I can effect in one of two ways, either by breaking the association of ideas and circumstances that are connected with my going to sleep, so that, not finding sleep through these, I shall learn to sleep in connection with other ideas and circumstances, or by bringing the present association of ideas and circumstances into operation at an earlier hour, so that at ten o'clock, or such other hour as may have been selected, the conditions will exist in which it has been my habit to fall asleep. Perhaps it has been my habit (a very bad one, by the way) to read myself to sleep. Now, if I commence my reading two hours earlier than usual, I shall be very likely to fall asleep two hours earlier than usual. But then, as I can only sleep a certain average number of hours

in the twenty-four, unless I rise at the end of that number of hours, I shall soon form a habit of wakefulness during a part of the night, or else the association between reading and going to sleep will be broken, and I shall still have to lie until midnight before sleep comes. It may be that my habit is to wait until every other member of the household has retired, and the house is closed, before I sleep. If I become a member of another household, where some one else assumes this office, I shall for a little time have a half-conscious feeling of care at night that may perhaps keep me from sleeping early, but, being freed from the responsibility, I shall soon lose the feeling of it, the association that connects the closing of the house with going to sleep will vanish, and I shall find my necessary sleep in connection with some other association. Sleep is so necessary that it will come to us, sooner or later, from sheer fatigue, even in circumstances where habit and association do not favor it. Soldiers in forced marches sometimes sleep on foot or in the saddle without halting, and it is exceedingly common for persons

who are greatly exhausted to sleep in the midst of pain or discomfort, and at unusual times. But the sleep so obtained is not sufficient to maintain the highest degree of health and strength. The sleep which is necessary for this purpose comes before we are so completely exhausted that we can not help sleeping, and comes at regular hours, the time of its coming being a matter of habit associated with certain incidents in our daily lives. These incidents vary widely in our various lives, and it would be easy to trace the association of these with the special habit of sleep in numerous instances; but perhaps enough has been said to show how the habit depends on such associations, and how the associations must be changed in order to change the habit.

Probably the examples already adduced, of the manner in which habit is broken or changed, are sufficient to make clear to us how we may change any habit, moral, mental, or physical, by changing the associations on which it depends, and in what direction we must work to change the associations. It is a very important item in the displacement of

an association to have some other association in its stead, and a little effort will supply this from within ourselves, even if we do not find it in external circumstances.

CHAPTER III.

SYMPATHY AND IMAGINATION.

THE term "sympathy," when used in a physiological sense, means the influence through which action or irritation of one organ produces a corresponding action or irritation of another organ more or less remote. It is a form of reflex action. Blushing is an example of this peculiar action. The brain has little or no direct control over the blood-vessels, but there exists in the body a second and much smaller system of nerves known as the sympathetic system, the entire function of which, so far as now known, is to regulate the expansion and contraction of the blood-vessels. The sympathetic system has nerve-centers of its own, located in various parts of the body, and is only slightly and indirectly connected with the brain; yet a feeling of shame, an-

ger, or some other emotion, may originate in the brain, and an impression produced thereby will be transmitted to the sympathetic system, which responds by allowing the blood-vessels near the surface of the face and neck to expand so that the part appears suffused with blood.

It was formerly supposed that all the so-called sympathetic actions of organs not directly connected were effected through the medium of the sympathetic nerves, and, with that idea, this system of nerves received the name that still adheres to it, though it is also called by several other names. That supposition, however, is no longer held, the sympathetic system being thought, as has been said, to be wholly occupied in the control of the blood-vessels. Yet strong sympathies exist between various organs, and, though we may not understand through what medium or in what way they are communicated, the relation which many of them bear to causes that are within our control is sufficiently obvious. Sympathy, like other reflex actions, is beyond the direct control of reason, will, or

consciousness, yet in some cases and to some extent may be influenced or even induced, indirectly, by these forces, as in the example of blushing ; and, on the other hand, through some connection not well understood, sympathetic action may be conveyed from organs not under our conscious control to those that usually are. For instance, in young children, indigestion, or some other form of irritation in the stomach or intestines, frequently produces spasms of the voluntary muscles. The same cause in older persons often produces headache, giddiness, disturbance of vision, palpitation of the heart, and other disorders in various organs. Cold or wet applied to the skin often produces an irritation of the internal organs, resulting in inflammation of the throat or lungs, diarrhoea, disease of the kidneys, etc., varying according to the particular organ or organs in which the sympathetic action happens to be manifested. The sympathetic relation between the head and the various organs contained within the abdomen is so close that, in dispensaries where the number of patients attending is so large

as to make it necessary to divide them into classes according to the general characteristics of their diseases, and assign each class to the care of a separate physician, it is customary to place "diseases of the head and abdomen" in one class. Often a disease which appears to exist in one of these parts is found to be really in the other, the apparent location being the result of sympathy.

The condition known as hysteria, or hysterics, is a sympathetic affection. It is very much more common among women than among men, and in very many cases its cause exists in some disease or irritation of some organ peculiar to woman, particularly the womb. The fact that rare cases do occur in men shows that it sometimes has a different origin, and this different origin may exist in women as well as men. It is, indeed, exceedingly difficult to discover its cause or original seat in a large proportion of cases. Wherever that cause may be, the manifestation is generally in some other part. Sometimes it is manifested by fits of unreasoning laughing and crying, sometimes by spasms of the mus-

cles, sometimes by severe pain in some part where no cause for pain exists. There is no disorder of sensation or motion that may not be simulated by hysteria. On this account, and because its cause is obscure, it is popularly considered a purely imaginary disease, and hence a reproach to those who are affected by it. Undoubtedly there are cases of reputed hysteria where there is no disease whatever, apart from the imagination of the alleged patient, but this does not disprove the existence of hysteria as a genuine disease.

There are also very many cases in which, while there is no established disease, unusual fatigue or excitement produces, through sympathy, a peculiar irritation resulting in a fit of genuine hysteria. When this has once occurred it is very liable to be repeated on subsequent occasions of fatigue or excitement, and every repetition confirms the habit and tends to render the fits more severe, in accordance with the general laws of habit. In all this there may be no imagination, and it may occur to one who has never seen or heard of hysteria. Still, in all such cases, as well as

in those having a fixed local cause for the disease, the imagination is capable of exerting a very great influence either to induce or to suppress the attacks. A similar power belongs to the exercise of the will, and so largely does it operate that, in the cure of hysteria, the first and most important consideration is to enlist the will on the side of recovery.

Imagination may act through sympathy on various functions of the body in such a way as really to produce the imagined disorder. Through this power of imagination, persons who are liable to certain forms of hysteria are very apt to have an attack whenever they see any one similarly affected, or even when they hear a description of an attack, or have their attention in any way specially directed to it.

Although the power of imagination in this regard is chiefly exhibited in cases of hysteria, it is sometimes shown in other forms of disease. There are many well-authenticated instances of persons in whom sympathy was particularly active, who have been made seriously sick, and some of whom have died, in

consequence of being led to imagine that they had symptoms of certain diseases, by the concerted comments of their acquaintances who wished to play a joke upon them, or of those who desired to experiment in this matter.

The familiar story of the fate of Gonello, the famous jester, who flourished in the early part of the fifteenth century, under the patronage of the Marquis of Ferrara, furnishes a striking illustration of the sometimes fatal effect of imagination. Having offended his patron, Gonello was condemned to die. Before the day of execution, however, the anger of the marquis relented so far that he determined to remit the death-penalty and, instead, to inflict upon the man a severe practical joke, such as he had delighted to inflict upon others. Gonello was not, therefore, informed of any change in his sentence, and at the appointed time was led to the scaffold, on which the public executioner awaited him axe in hand, and around which stood an immense throng of people expecting to see him beheaded. His neck being bared, he laid his head upon the block, and, with closed eyes, awaited the

final blow, when the executioner, having been privately instructed by the marquis, exchanged the axe for a pail of water that stood in readiness, and dashed the water upon Gonello's neck. The people, instantly comprehending the joke, shouted with glee, but the victim of it did not move, and it was presently found that the shock of what he had imagined to be the falling axe had killed him.

It is notorious that, in epidemics of certain diseases, those whose fears lead them to anticipate the outbreak of the disease in their own persons, and to imagine that they have the premonitory symptoms, are usually among the first victims and the least likely to recover. Physicians and others who have a knowledge of diseases are generally difficult patients to care for when sick, because their habit of noting symptoms leads them to watch their own, and, by imagining dangers, to induce them. Dr. Bennett, in his great work on "The Principles and Practice of Medicine," says :

"Nothing is more common for medical students, when first studying individual diseases,

than to imagine themselves to be the victims of each in succession. Then, in certain conditions of the system, it is well known that actual pain may be produced in a part by fixing our attention upon it. Hypochondriacs are martyrs to these erroneous impressions. Supposed pains in the limbs or stomach prevent their walking or eating, and their health suffers from want of exercise or want of food. Sir Benjamin Brodie has given some singular cases where so-called nervous pains of this description have actually led to tenderness and swelling of the integuments covering the part. It may easily be understood how facts of this kind may be made to assume the appearance of prophecy, and how in forming a valetudinarian that he will certainly have a rheumatic or neuralgic pain on any given day is likely to produce it.

“As illustrative of the strong influence of predominant ideas, even in healthy persons, I may mention the following circumstances: Mr. Macfarlan, druggist, North Bridge, Edinburgh, informed me that on one occasion a butcher was brought into his shop, from the market-

place opposite, laboring under a terrible accident. The man, on trying to hook up a heavy piece of meat above his head, slipped, and the sharp hook penetrated his arm, so that he himself was suspended. On being examined, he was pale, almost pulseless, and expressed himself as suffering acute agony. The arm could not be moved without causing excessive pain, and in cutting off the sleeve he frequently cried out, yet when the arm was exposed it was found to be quite uninjured, the hook having only traversed the sleeve of his coat!

“A clergyman told me that some time ago suspicions were entertained in his parish of a woman, who was supposed to have poisoned her new-born infant. The coffin was exhumed, and the procurator-fiscal, who attended with the medical men to examine the body, declared that he already perceived the odor of decomposition, which made him feel faint, and in consequence he withdrew. But, on opening the coffin, it was found to be empty, and it was afterward ascertained that no child had been born, and consequently no murder committed. Numerous instances might be given of

individuals engaged in duels, or on other occasions, who have supposed themselves to be wounded, and have fallen down as if dead, without having received the slightest injury."

In a treatise on medicine, written over fifty years ago by the famous Dr. Good, among many illustrations of the effects of imagination are the following: "Greding gives an account of a medical practitioner who applied to him for assistance, under an impression that his stomach was filled with frogs, which had been spawning ever since he had bathed, when a boy, in a pool in which he had perceived a few tadpoles. He had spent his life in trying to expel this imaginary evil, and had traveled to numerous places to consult the first physicians of the day upon his obstinate malady. It was in vain to attempt convincing him that the gurglings or borborygmi he heard were from extricated erratic wind. He argued himself, says M. Greding, into a great passion in my presence, and asked me if I did not hear the frogs croak.

“I have at this moment under my care a hypochondriac of about fifty years of age, who affords sufficient proof that Molière drew his ‘*Malade Imaginaire*’ from nature, and hardly added an exaggerating touch. His profession is that of the law, his life has been uniformly regular, but far too sedentary and studious; without having any one clearly marked corporeal affection, he is constantly dreading every disease in the bills of mortality, and complaining, one after another, of every organ in his body. . . . It is rarely that I have left him half an hour, but I have a note to inform me of some symptom he had forgotten to mention, and I have often five or six of these in the course of the day. The last was to state that shortly after my visit he had had a discharge of three drops of blood from the nose—a change which he thought of great importance, and requiring immediate attendance. His imaginary symptoms, however, soon disappear, provided they are listened to with gravity and pretended to be prescribed for; but not otherwise. Yet in disappearing they only yield to others that can only be

surmounted in like manner. His head is too much confused to allow him to engage in any serious study, even if it were prudent to recommend it to him; but on all common subjects he is perfectly clear, and will converse with shrewdness and a considerable extent of knowledge. His bowels are sluggish; his appetite not good, though he eats sufficiently; his sleep is unquiet, but he has enough of it without opiates; his pulse is variable, sometimes hurrying on abruptly, and without any obvious cause, to a hundred strokes in a minute, but often very little quicker than in state of health. His tongue varies equally and is irregularly clean, milky, and brownish and then suddenly clean again. He is irritable in his temper, though he labors to be calm and is so rooted to his chamber that it is difficult to drag him from it. He has now been about ten weeks, but it is during the winter and the season is too inclement for him to venture abroad. I look forward to his restoration in the spring, from exercise, change of air, and a course of tonic medicines."

Though these accounts were written so

many years ago, they describe, with perfect accuracy, cases that are exceedingly frequent to-day. There is, in the practice of most physicians, a considerable class of patients whose only ailments are such as have resulted from their own imagination, yet who have really come to such a state that they need medical care. Disorders of this class generally affect the digestive or such other organs as are but little controlled by the will, yet they may affect any part.

Nearly allied to this condition is one in which imagination affects the mental instead of the physical functions. Dr. Good, in the treatise already mentioned, describes this as a species of mental extravagance or hallucination, having several varieties, concerning which he says :

“The age of the first of these varieties, that of chivalry, or romantic gallantry, has nearly, if not altogether, departed. It may be regarded a generous and high-spirited flight of the imagination that gives a visionary coloring to the external world, and combines, without a due degree of discrimination,

ideas of fact with those of fancy. Like many of the varieties of *empathema*, or ungovernable passion, it may lead to, or be combined with, *ecphronia* or insanity.

“I have sometimes had to attend patients who, having spent the greater part of their days and nights over the most captivating novels of the present day, had acquired so much of this falsity of perception as to startle their friends around them, and to give evident proofs that they were of a mind occasionally deranged, though, when the attention could once be seriously engaged, capable of being brought down to the soberness of external objects and real life. These have commonly been ladies, unmarried, or without a family, about the middle or a little beyond the middle of life, of a nervous temperament, fine taste and fancy, but whose education had been directed to subjects of superficial or external ornament, rather than of intrinsic excellence. Their manner has been peculiarly courteous, their conversation sprightly and figurative, and their hand ready to aid the distressed. But it has been obvious that in

all they were saying or doing they had some ideal character in their minds, whose supposed air, and language, and manners, they were copying; and the distressed were always most sure of relief, and of a relief often beyond the necessity of the case, whose story was combined with some perilous adventure, or sentimental catastrophe.

“In former times, however, when the wild and daring spirit of romance formed the subject of popular study, and

‘The spinsters and the knitters in the sun,
And the free maids that wove their threads with
bones,
Were wont to chant it,’

this bewildering triumph of the imagination over the judgment was far more common, and was carried to a much higher pitch. The high-toned and marvelous stories of ‘*Là Morte d’Arthur*,’ ‘*Guy of Warwick*,’ ‘*Amadis of Gaul*,’ ‘*The Seven Champions of Christendome*,’ and ‘*The Mirror of Knighthood*,’ the splendid and agitating alternations of magicians, enchanted castles, dragons, and

giants, redoubtable combatants, imprisoned damsels, melting minstrelsy, tilts and tournaments, and all the magnificent imagery of the same kind, that so peculiarly distinguished the reign of Elizabeth, became a very frequent source of permanent hallucination. The historian of Don Quixote adhered strictly to the tenor of his times in representing the library of this most renowned knight as filled with romances of this description, and himself as being permanently crazed by an uninterrupted perusal of them. And that the same morbid effect was not confined to Spain, and was, indeed, common to our own country, we know from the severe but just invectives of Ascham against this class of writings, and his complaints of the disordered turn they had given to the public mind; and still more from the necessity Shakespeare felt himself under in making all his maniacal characters, whether really or but pretendedly so, deeply versed in the prose or poetical romances of the day, and throwing forth fragments of the most exquisite force or beauty in the midst of their wildest and most discordant ravings;

Lear, Edgar, and the heart-broken Ophelia are in this respect alike gifted, and show to what sources their reading had been directed. Without an attention to these casual glances it is impossible to understand the meaning of the sentiment, and its force or feeling is lost upon us ; as in the following burst of Ophelia which consists of a string of quotations or allusions to picturesque customs : ‘ You must sing Down a-down an you call him adown-a. O, how the wheel becomes it ! It is the false steward that stole his master’s daughter.’ We have not space for the explanation, but it may be found in the commentators, or in the interesting and elaborate history of ‘ Shakespeare’s Times,’ by my early and valued friend Dr. Drake.”

If Dr. Good found such results from imaginative reading in a time that, compared with this, was very barren of such reading, we would naturally expect to find similar results and much more commonly now. It is true, as he says, that that form of mental extravagance which busied itself with the paraphernalia of chivalry, as castles and

dungeons, imprisoned ladies and knights in armor, has nearly passed away with the age that produced it. The romances of to-day rarely deal with such matters. But, while the matter changes, the manner remains. There are to-day thousands of girls whose imaginations have been so swollen and distorted by a flood of poisonous fiction that their views of life are as false and visionary, and themselves as unfit to engage in any practical affairs, as was the case with those ridiculously courteous dames that Dr. Good prescribed for. Instead of dragons and chimeras we have clairvoyants and spirit-mediums, instead of mounted knights and squires we have animated manikins representing a phase of society that never was and never will be, or perhaps house-breakers and detectives, Indian fighters and border ruffians, and, instead of feudal castles, hotels, railroad-stations, and all the appurtenances of modern life. It is perhaps questionable whether the romance of Don Quixote's time was not less unwholesome than that of ours.

Certainly it is true that works of fiction

are not all nor altogether to be condemned. On the contrary, many of them are admirable in scope and tendency, and a fair acquaintance with such is an essential part of a liberal education. It is not the first part, however, and one who makes it so, or who reads little except works of fiction, even if these are well chosen, develops an unhealthy imagination at the expense of sound judgment and other mental faculties. In such cases generally, however, there is not even a good choice of fiction. Indeed, it is not to be expected that there will be, from the limited knowledge possible with such a course of reading, and the consequent perversion of faculties. While, therefore, too much imaginative reading even of the best kind is sufficient to produce an unhealthy state of mind, practically such excess always involves the added danger of a pernicious selection by the impaired judgment.

In the majority of such cases there is no such radical disorder of the mind as constitutes insanity, but there is so much distortion of the reasoning and perceptive faculties

that the mind is no more capable of healthy exercise and development than a body would be with contorted limbs. Dr. Good does not hesitate to call such a condition a disease, but says that its cure is to be sought in general instruction rather than in medicine, a rule which he applies to all varieties of mental extravagance short of insanity, wisely remarking that "individual cases of enthusiasm and fanaticism have existed, and will probably continue to exist, in all ages; but when the general mind is well informed, and the social feelings and virtues are duly estimated and widely cultivated, the wild-fire will burn in vain, and meet with little or no fuel to support its rage."

All of the emotions are capable of exerting a strong sympathetic influence upon the action of various organs, both in health and in disease. We have already spoken of blushing as an example of this influence. We know, too, that sudden joy, anger, and various other emotions make the heart throb tumultuously, confuse the brain, and sometimes take away temporarily the power of speech. Sometimes,

indeed, the effects are much more severe and permanent. Thus, it is said that, after the battle at the Lake Thrasis, two women were so overjoyed at seeing their sons return safe that they dropped dead. Many instances have occurred, both in ancient and modern times, of death from sudden and excessive joy, grief, anger, terror, etc. The cause of death in such cases is the disturbance in the action of the heart or brain, or perhaps some other organ, from the influence of the emotion.

Sometimes such disturbance results in insanity. Plutarch tells of a soldier who became insane from the joy he experienced in wounding King Cyrus in battle, and instances are found in all ages of a similar result from uncontrolled emotions of nearly every kind. Children are sometimes rendered idiotic by sudden fright, and at other times are made strangely nervous and miserable for life by the same cause. Many pitiable examples of such effects exist as the result of sportive but cruelly thoughtless attempts of acquaintances to frighten them.

The sympathetic influence of various emo-

tions on the secretions and excretions is very remarkable. Nearly every one is familiar with the fact that certain emotions have a decided effect on the flow of tears and perspiration. It is not so generally known, though no less a fact, that they influence in quantity and quality the flow of saliva, milk, the product of the kidneys, and that of the lower bowel. Probably all of the secretions and excretions are more or less subject to these influences. As a general rule, violent emotions diminish the production of saliva and other digestive fluids, and of milk, and increase that of tears, perspiration, and the excrements of the kidneys and bowels. Certain emotions have a very curious influence on the quality of some secretions. For instance, it is not very uncommon for a child to be thrown into convulsions if allowed to draw milk from the breast of a woman who has just given way to a violent fit of anger or terror, and instances of sudden death of the child from this cause are by no means unknown. It is said, too, that strong anger sometimes imparts to the saliva of dogs, cats,

and other animals, including men, a peculiar virulence, from the effect of which a person bitten by them may suffer severely and possibly die, even though the angry animal has not hydrophobia, but is perfectly healthy, both before and after the bite.

From the foregoing facts it is obvious that improper action or exposure to hurtful influence, of one part of the system, is liable to induce serious disorder of some other part, and that a perfect control of our imaginations and passions, as well as a care for the physical condition of the various organs, is necessary to maintain the body in sound health. We have elsewhere considered the danger of the passions themselves becoming disordered and passing beyond our control through continued indulgence, but here we see how their free exercise interferes directly with physical functions concerned in digestion, secretion, and other important operations of life, and so may induce bodily disease. Farmers and stock-raisers understand the practical issues of this fact in their relations to the health of animals, and are careful for this reason to

keep their stock as free from strong emotional excitement as possible. In regard to the imagination, it is best that we restrain it altogether from the probability of ailments affecting ourselves. We should observe *all* the laws of health, so far as we can know them, remembering that a seemingly slight violation sometimes produces very serious and unlooked-for results, and at the same time we should avoid speculating upon the ills that may happen to us, and even upon those that have happened. If we are ill, we shall probably find it out without previously looking for it, and in that case our proper course is to leave the minute consideration of symptoms and probabilities entirely to some one better qualified than ourselves to deal with them, and whose investigation will not produce new disorders or aggravate those already existing, as will generally be the result with those who undertake to study their own ailments.

CHAPTER IV.

ORGANS PECULIAR TO WOMAN.

THE human body, exclusive of the head and limbs, is divided for the purpose of description into three principal parts, known respectively as the chest or thorax, the abdomen, and the pelvis. The chest is that part which extends from the lower border of the neck to the lower ribs, and contains the lungs and heart. The abdomen commences at the lower border of the chest, and reaches to a little below the projecting upper border of the hip-bones. It contains the stomach, liver, most of the intestines, the pancreas, the spleen, and the kidneys. The pelvis is that part which is below the abdomen. It contains a small part of the intestines, particularly the lower part of the bowel, which is called the rectum, and in front of this the bladder. In

the female the pelvis also contains all the organs that are peculiar to woman, except the breasts.

The most important of these peculiar organs, in many respects, is the womb, or, as it is technically called, the uterus. When a woman becomes a mother, it is within the womb that the child is formed and nourished until the time of its birth. It is, however, not only nor chiefly on this account that the proper development of the organ is important, but because *its condition exercises a controlling influence over the physical and mental health of every woman, whether a mother or not, for about thirty years of her life.*

The womb that has never been fertile is a pear-shaped body, a little flattened, about three inches long, two inches wide at the broadest part, and an inch thick. Of course it is hollow, but the cavity is very small, and the walls are very thick and hard. It is nearly in the center of the pelvis, between the bladder and the rectum. The ovaries, two in number, one on each side of the womb, are oval bodies, about an inch and a half long,

three quarters of an inch wide, and a third of an inch thick. Each ovary communicates with the cavity of the womb by a narrow tube. The womb opens into the upper end of a passage, about five inches long, called the vagina, the lower end of which opens upon the surface of the body. Near the lower end of this passage, and opening into it, is the mouth of the urethra, which is the tube that conveys the urine from the bladder, so that the urine and the discharges from the womb finally escape from the body through the same outlet.

The ovaries contain a large number of ova (plural of ovum). Each ovum is a very minute body, globular in form, measuring when fully developed only $\frac{1}{16}$ of an inch in diameter. It is capable of becoming, under peculiar circumstances, the germ of a human being. Ordinarily, however, the ova, as fast as they mature, are discharged from the body very much after the manner of excretions, except that their discharge is attended with a very considerable disturbance of the general system. During childhood the ova remain in

the ovaries, imperfectly developed. At length, however, usually at about fourteen or fifteen years of age, though sometimes earlier, and sometimes much later, the first ovum is matured. When fully developed it passes from the ovary into the womb, from which it finally escapes through the vagina.

About the time that the ovum is matured, all the organs just described are very much engorged with blood, and there is usually a feeling of weight or a dragging pain in the pelvis. Frequently, too, there are severe headache or nausea, pain in the back, and other uncomfortable sensations. At the same time there is a slight discharge of mucus from the vagina. The discharge increases in quantity, and after a short time is tinged with blood, and in the course of a day or two it appears to be nearly pure blood. This blood comes chiefly from the mucous membrane lining the womb. Generally, but not always, the painful sensations disappear as soon as the hæmorrhage is well established. The latter, however, continues at its height for a day or two, and then gradually subsides. At the end

of from four days to a week after the first appearance of these symptoms they have usually entirely disappeared, and everything goes on as before. After this function has once been established, however, an ovum is matured and discharged every four weeks as a general rule, with all the attendant phenomena just described.

This process is called "menstruation," or "monthly sickness," because it takes place every lunar month. It is sometimes extremely inconvenient, both by its presence and because unusual care of one's self is requisite at such a time, but it is of very great importance that nothing should interfere with its natural course. If it is arrested or interfered with in any way, or if due care is not exercised during its continuance, the most disastrous results are liable to follow. Prominent among these results are inflammation of the womb and of other organs, displacements of the womb, offensive chronic discharges, hysteria, epilepsy, catalepsy, and various other nervous diseases, including some forms of paralysis, as well as insanity and death.

It sometimes happens that after the first occurrence of menstruation it does not return for several months, or that during the first year of puberty, as this period of life is called, the exercise of the function is quite irregular. This need not cause any alarm if the general health is good and no discomfort is felt, but, if otherwise, the family physician should, by all means, be consulted. Sometimes, too, severe sickness causes a temporary suspension of the function, and it occasionally becomes necessary, after recovery from sickness, to resort to the use of medicine to restore it. Nothing of this kind should ever be attempted without the advice of a competent physician.

As a general thing, menstruation occurs every four weeks in every unmarried woman's life, until she is about forty-five years of age, when it usually becomes first irregular, and then ceases altogether. In rare cases it happens every two or every six weeks, or even at other intervals. If this is so from the commencement, and the intervals are always of equal length, and if with this the health

continues perfect, it may fairly be regarded as a constitutional peculiarity that need excite no anxiety, but will be best let alone. If, however, in such a case the health is impaired, whether the impairment is apparently connected with menstruation or not, or if, even though there be no visible failing of health, the intervals which have once been regular become longer or shorter, a physician's advice should be sought without delay. So, too, in case any irregularity, such as during the first year may occur in consequence of incomplete development, should continue beyond that time, as well as if, as sometimes happens, the flow becomes more or less copious than has been habitual.

The nervous connections and sympathies of the womb are very extensive. It has already been remarked that disorder of this organ produces very serious effects on many other organs, some of which are distant from it. In particular, the brain and the entire nervous system sympathize very strongly with the womb, and are often alarmingly affected by its derangements. So, too, excessive mental

excitement or nervous impressions sometimes cause serious disturbance of the functions of the womb. Sudden and violent emotion, as, for instance, fear, grief, anger, etc., occurring during menstruation, will sometimes arrest it. Over-fatigue often has the same effect. Probably one of the commonest causes of arrest of menstruation is cold, as when one "takes cold," or when cold is applied to the surface of the body. Especially is this true of the application of cold to the lower extremities.

When the function is arrested through any of these causes, the symptoms that usually follow, immediately or within a few hours, are very distressing. Violent pain is felt in the pelvis and lower part of the abdomen, and sometimes in the back and thighs. Very often this is accompanied by severe headache and nausea, and sometimes by chills, followed by more or less fever. Exhaustion is very great, and it becomes necessary to go at once to bed.

From these facts it will very readily be seen that great care is requisite during each

menstrual period to guard against any disturbance of the natural course. It is unwise, at such a time, to attend balls and parties, or to indulge in any violent and long-continued exercise, although moderate exercise is usually beneficial. Picnics and similar excursions are unsafe, from the fatigue they are liable to occasion, as well as from the danger incurred of taking cold through the commission of some imprudent act. Especially should one avoid, at such a time, sitting or standing in a draught of air, or in any damp or cold place, going suddenly from a heated room to a cold one, getting the feet wet or cold, or sitting down on any damp or cold surface, as on the ground, on a marble slab, on a doorstep, or stone. Cold baths should be indulged in with great caution, and cold foot or hip baths not at all. Sleigh-rides, or rides of any kind in cold weather, should not be taken without the most ample provision for keeping the body, and especially the feet, warm. Simple as these precautions may seem, their neglect has brought many a healthy girl to an untimely grave.

Sometimes it happens that a girl, wishing to avoid the inconvenience of menstruation, in order that she may attend some party or place of amusement which the condition might interfere with, deliberately attempts to check it, by making use of a cold foot or hip bath. The folly of such an act is only equaled by the misery it brings. Frequently it is successful in its first object, that is, in arresting the hæmorrhage, but the hours of agony that commonly follow will effectually prevent her from enjoying the proposed amusement, or even from being present at it at all, and the after-effects may be still more serious.

Some drink large quantities of vinegar instead of using cold water, and for the same purpose. It is a very foolish experiment, as it can never be relied on to arrest menstruation, but can very generally be relied on to disorder the stomach, and lay the foundation for dyspepsia or some other troublesome complaint, while, if it should accomplish what is designed, it would involve the dangers already mentioned. The same is to be said of all other methods that are used with the

same purpose, and some of them are even more objectionable than those named. Menstruation is a development of the prime law of womanhood, and any attempt to check or interfere with its natural course is unmaidenly, unwomanly, and unclean, besides being dangerous in proportion as it is successful.

If, during menstruation, one gets wet feet, or comes in from a walk or drive wet or chilled, no time should be lost in getting thoroughly dry and warm. Every article of clothing that is in the least damp should be changed at once. It is also a good plan to take a warm drink or a mild cordial. If the symptoms described as belonging to arrest of menstruation make their appearance, the patient should at once get into a warm bed (never a cold one), the feet be made warm, if they are not so, by the use of friction and hot flat-irons wrapped in flannel and laid against them, or some similar means, and the family physician should be immediately summoned. No delay should be made about this, as every hour that the condition continues increases the difficulty of restoring the natural one.

In health there is no continual discharge of any kind from the vagina except during menstruation. Any such thing continuing between the menstrual periods, whether bloody or not, is an indication that something is wrong, and should always be made the subject of medical advice, as, if neglected, it may have serious results.

Perfect cleanliness of the external genital organs is at all times essential to health and comfort. This is sometimes neglected through a false idea of modesty. A similar reason often withholds those who suspect that something is wrong with their sexual organism from mentioning their suspicions or the reasons for them to those who are competent to give advice on the subject. This is all wrong, and rather prudish than modest. The subject is not one ever to be unnecessarily alluded to, or even thought about, but, whenever any unusual sensation or appearance is observed in these parts, it should be mentioned to the mother or whoever stands in the place of a mother, or to the physician, or, if at school away from home, to a lady teacher or matron.

This is the more important if the annoyance, however slight, is of such a nature as frequently to direct thought or consciousness to it. Concealment at such a time frequently brings about the very conditions which a sense of delicacy seeks to avoid.

The position of the womb, closely interposed between the bladder and the rectum, is important in its relations to the health of all these organs, and explains in a great measure the influence which they have upon one another. If the rectum is continually distended with fecal matter, as in habitual constipation, it presses against the womb, sometimes to such an extent as to cause a displacement of the latter, an accident which occasions great distress, and is frequently the direct cause of intense agony during each succeeding menstrual period. Even when displacement is not produced, the pressure from the rectum is productive of so much discomfort as in many cases to quite unfit one for the ordinary duties and enjoyments of life, while the congestion of the rectum resulting from the constant irritation produced by its

contents extends frequently to the womb and all the contiguous organs, and is liable to engender organic disease in these organs that will make the remainder of life a burden from which death will be a happy release. Similar facts exist in the relations of the bladder to the womb, while, on the other hand, it is evident that any wrong position or condition of the womb is likely to affect injuriously either the bladder or the rectum, or both. When the womb is displaced, it very commonly presses upon these organs in such a way as to make the passages from them difficult and painful, and thus often excites obstinate and dangerous inflammation.

The bladder should never be allowed to remain unemptied longer than from six to ten hours, and never, on any account, so long as that if it becomes greatly distended, or produces a feeling of discomfort. If the contents of the bladder are retained longer than this they are liable to become partially decomposed, a condition in which they not only are very offensive, but also frequently excite an inflammation of the bladder that is very

painful and difficult to cure, and that sometimes extends to the kidneys and causes death.

But if the bladder becomes too full, even though the time since it was last emptied is less than that mentioned, another danger threatens. The bladder is partly surrounded by muscular fibers, by the contraction of which it is emptied. When its fullness reaches a certain point, or when the time arrives at which we have formed a habit of emptying it, these fibers are impelled to contract. We may for a time resist that impulse by force of will, and frequently when we do so the impulse is less felt after a while. In the mean time, however, the bladder is getting fuller and fuller, and the muscular fibers are of course subjected to more and more of a strain, and if we continue to prevent the discharge it sometimes happens that the strain on these fibers becomes so great that they are paralyzed, and it is then impossible for the bladder to be emptied in the natural way. When this occurs it is necessary to seek relief at the hands of a surgeon, and if this is not done the

distention of the bladder continues until the organ bursts, and an agonizing death is the inevitable consequence.

The rectum *should always be empty*, except for a few moments just preceding its evacuation, which should occur once every day, and *always at the same hour*. This rule is very important, and neither business nor pleasure should be allowed to interfere with it. Irregularity in the time of evacuating the rectum is one of the most fruitful causes of disease. It does not much matter what hour of the day is chosen for this, though the morning is usually most convenient, and the habit is more easily established if the effort is always made just after a meal. Whatever the time selected, it should always be adhered to, the effort to relieve the bowels being made every day at that time, whether the inclination to do so is felt or not. It should not be done hastily, and violent straining is always to be avoided, as it often causes serious injury. If the act is not readily accomplished, after a reasonable trial it should be deferred, if possible until the next

day at the same time. In this way a habit will speedily be acquired that will do more than almost any other one thing for the preservation of health.

It is not to be understood that a certain hour by the clock should be observed so much as a certain time in the order of each day's occupation. For example, if the act is always made to follow immediately some other daily act, such as rising in the morning, dressing, eating a certain meal, or anything else which always occurs at about one time in the day, after a short time the desire to relieve the bowels will always be felt immediately after the accustomed act of rising or dressing, etc., the rectum being filled just at that time and at no other, for the motions of the bowels are more a matter of habit than most people realize. Aside from the question of health, neglect in this matter is really more uncleanly than neglect of bathing, for the rectum is a no more appropriate place for the accumulation of effete matter than the skin is for the accumulation of dirt.

These rules are at all times of the gravest

importance, but if possible even more so during the menstrual periods, when the increased flow of blood to the womb and surrounding parts renders them more than ordinarily liable to injury. Owing to certain physical peculiarities, women are somewhat more liable than men to contract a habit of constipation. Moreover, many circumstances frequently combine to tempt them to neglect proper care of themselves in this respect.

This is especially true of women living in the country, who have generally no convenience for relieving the bowels except at some little distance from the house, often at the end of a garden-path that is sloppy in rainy weather and bordered by wet grass and bushes, or overhung by dripping trees, and this when reached is very commonly a slight and very rude structure, repulsive in all its appointments, stifling with heat and bad odors in summer, and traversed by piercing winds if not by snow in winter. Many slight and some serious cases of sickness are directly traceable to the use of such ill-adapted arrangements, but a far greater amount of

suffering has its origin in the neglect of their use. There is much to encourage this neglect in sensitive persons, particularly in seasons of weakness or of slight indisposition, but the objectionable features can in most cases be much modified by a little thought and labor, and it is certainly better to make the best of them, and resolutely keep the bowels in a healthy state, even at the cost of some discomfort, than to suffer the chronic or periodic headache, the digestive disorders, the general lassitude and torpor, that are the almost certain penalties of irregularity of the bowels, and the risk of graver maladies that have been mentioned as being its frequent results.

CHAPTER V.

FEMININE EMPLOYMENTS.

It is apparent, from the facts already considered, that woman is physically quite unfitted for many of the employments in which men pass their lives. Any vocation, for example, which involves constant liability to exposure to the vicissitudes of weather, without the opportunity afforded of adequate protection, is unsuited to a woman's physical nature. So, too, is anything involving great mental or nervous excitement, especially if the nature of the pursuit is such that no periodical abatement of energy can be provided for, or that no guarantee may be had that the greatest amount of excitement may not often occur just at the time when it is most inconvenient and unsafe.

There are very many women, in fact, in

whom so strong a sympathy exists between the organs of reproduction and the brain, or the function of menstruation taxes so severely the general system, that during the exercise of that function they are totally unfitted for any kind of mental labor, and unable to make more than the very lightest physical exertion. This is characteristic, too, of many whose general health is good, and who are by no means weak either in mind or body.

It is true that instances are occasionally seen of women who are able to disregard or defy this periodical weakness, and to engage in the most arduous and unremitting labor of mind and body without apparent injury or inconvenience; but these are to be regarded as exceptional cases, curious anomalies, rather than examples of what is generally possible. The majority of women, while not wholly prostrated, are yet able to do and endure much less without injury at such times than at others. In communities where it is customary for women to do a large share of heavy labor, those diseases which are peculiar to women are much more common than

elsewhere. This is especially true of manufacturing towns, where women and girls are largely employed in mills or factories.

It is also a fact that insanity, nervous diseases, and various disorders of a more or less general nature, are of more than ordinary frequency among women who, during that part of their lives when the reproductive organs are most active, are employed in labor which, though not always of a violent or especially arduous character, affords little opportunity for rest or relaxation. Of late years it has been remarked by many that this is notably true of farmers' wives and daughters, particularly in dairy districts and localities where the farm-work is so arranged that at certain seasons of the year the farmer's household is largely increased by the employment of hired men who lodge in his house and board at his table. In such circumstances the women of the family work as continuously as, or even more so than, the men, though the work of the former is generally of a lighter kind.

It certainly is not to be denied that a

farm-life in some parts of the country involves more danger from exposure to inclement weather, or to miasmatic influences, as well as from various local or incidental causes, than belongs to some other modes of life ; yet undoubtedly very many cases of disease and death among the women of farmers' families result directly from the overtaxing of their general systems by the ordinary routine of household duties at a time when so much of their strength and vitality is demanded by the requirements of their physical nature as women. The activity of the reproductive system is generally continued, even, if need be, at the expense of the general system, or of some special organs.

This accords with a grand natural law which provides for the propagation of all living things, and is closely allied to that mysterious law of nature by which every living thing seems to struggle against death. Every species of life-endowed creature is endowed also with the power of reproducing its kind. Without this, of course, all life would soon become extinct, therefore the energies of individ-

ual life become subservient to the preparation for and exercise of the function of reproduction. There is a beautiful harmony in this, inasmuch as the preservation of a race is of greater importance than the life of an individual.

We find that plants mature their seeds even when themselves are diseased and dying. Frequently, indeed, they bear fruit earlier or more abundantly when their life is in danger of being terminated than they otherwise would. In dry seasons grain ripens earlier than usual, though the straw has not attained its ordinary size, as if it were matured in haste lest the plant should wither before provision could be made for the growth of the next year's crop. A fruit-tree that has never borne, but is vigorous and growing rapidly, will often bear a large quantity of fruit if half its branches are cut off, or if its roots or trunk are so mutilated as to endanger its life. Often it happens that a tree which is about to die will burst into blossom at an unusual season of the year, as if futilely endeavoring to forestall its own death by reproducing its own kind.

It is often remarked that the development and germination of the seeds of plants, and the bringing forth of young by man and other animals, are similar processes in very many respects. The careful gardener removes the blossoms from weakly trees, that they may use what strength they have in their own development. But in a feeble or overtasked woman the course of nature can not be so interfered with. The process of menstruation must continue, and all other things must give way to it.

It is by no means intended that women must be idle because they are thus constituted, but merely that they must be conformed to the law of their nature; and this law, while it is the glory, is not the weakness, but the limit, of womanhood. It is every way desirable that a woman should be occupied with such employments and recreations as are adapted to her nature and position. Work, within the limits of health, is the natural order of woman's life as well as of man's.

It is only when work is unsuited in character or amount to the conditions in which

the individual is placed, that it is unnatural and injurious. In all work, respect must first be had to the grand end to which life is shaped—the possibilities of which it is capable, as well as the exigencies of the passing moment; and for an individual to undertake a course of action which he or she can pursue only in a halting and imperfect manner, while there is a range of perfection or a possibility of excelling within his or her scope, is to throw away life, and, like Esau, to despise the birthright.

For example, if Rosa Bonheur had chosen to be a blacksmith, she would probably have done the work nearly as well as a man, perhaps better than many men, but certainly she could never hope to equal in that line of labor the best blacksmiths among men, and in the making of a second-rate blacksmith the world would have lost a great artist. So if the author of the “Legends of Sleepy Hollow” had continued in the business which in early life he undertook and in which he was very unsuccessful, he would have lived a little and unprofitable life, and the name of

Washington Irving would have had no place in the history of modern literature.

Similar instances might be multiplied indefinitely; and the world is full of individuals who fail to do their proper work well because they seek to do work which is not theirs and which they can do but imperfectly. Not all are Bonheurs or Irvings, but for all some kinds of work are more suitable than others. Often it happens that the way is not open for us to engage in the work for which we are perhaps best adapted, that other work claims our attention in a manner that we may not disregard. In such a case we show our wisdom if we accept the inevitable with good grace, making the most of such opportunities as we have, and doing the work of our necessity in the best manner of which we are capable.

No inconsiderable portion of the lives of many women is spent in the occupation of sewing. Within the present century the aspects of this kind of industry have been greatly changed by the introduction of the sewing-machine. By this means much of the former

tediousness of sewing is abolished, and a good sewing-machine is a great aid in the labor of a household. But it has its serious disadvantages. Most of the sewing-machines now in use are operated by the feet by means of a treadle, and the peculiar motion of the feet for this purpose is very wearying to a certain set of muscles, some of which assist in supporting the womb in its proper position. Besides this, the lower extremities and the lower part of the body becoming exhausted by long-continued exercise of this kind, act strongly by sympathy upon the reproductive organs. The position in which one usually sits at the sewing-machine also adds largely to the bad effect by causing the abdominal organs to press more heavily than usual upon the womb, and at the same time depriving it of the support of some of the abdominal muscles. The result of all this is, that very many disorders of the womb and adjacent organs are caused by the habitual use of sewing-machines. Most of the evils from this cause would be avoided if the following rules were generally observed by women :

1. Never use a sewing-machine at all until fully matured.

2. Never use a sewing-machine when not perfectly well and strong.

3. Never use a sewing-machine long enough to become fatigued by it, nor try to do a large amount of work on it in a short time.

The first of these rules is applicable to many things, which will readily suggest themselves to the mind, besides the use of sewing-machines. The period of development of the reproductive system is always a critical one, not free from danger in itself. The entire resources of the body are then taxed to the utmost, and the organs which are being perfected are especially sensitive to sympathetic impressions, and liable to disease. Therefore, many things which a mature woman may do with impunity, and not a few of which may even be permitted to a child, are altogether unsafe for the girl just upon the threshold of womanhood.

The rules given are, of course, chiefly applicable to the domestic use of the sewing-machine. They can not easily be observed

where it is used as a means of gaining a livelihood. There is little to be said of the necessity that sometimes impels to this course. Like many necessities, it is to be deplored; like all, it is to be submitted to. If women are at liberty to choose something better, they should certainly do so, but, when choice lies between danger and starvation, one must face the danger. In many large factories sewing-machines are now run by steam, the operatives having only to arrange and guide the work. This is a healthful regulation, and is greatly to the credit of the employers.

The household cares that chiefly occupy the attention of a large proportion of women and girls are, for the most part, quite free from injurious influences upon healthy bodies, provided they are not so onerous as to interfere with needful rest. There are some exercises connected with such work, however, that are not wholly free from danger, and should either be left to men, or, if done by women, should be done with much care and moderation.

All heavy lifting is of this character. In

lifting, and especially in lifting to a considerable height, as, for example, in lifting a pail of water from the floor to a table, or a scuttle of coal to the top of a stove, there is a severe strain not only on the muscles of the arms and back, but also on those of the abdomen. This strain of the muscles strongly compresses the organs within the abdomen, and forces some of them down into the pelvis and against the womb, bladder, and rectum. Owing to a difference in the shape of the bones of the pelvis, the pressure within from such a cause is greater in women than in men. Consequently, not only is the womb liable to suffer, but the other organs are more apt to be injured than when the lifting is done by men. The moving of heavy furniture, shaking of heavy carpets, and all similar exercises, are undesirable for women, for the same reasons.

Especially are all such strains undesirable for girls between twelve and twenty years of age. Even young children, as has been already intimated, are in less danger of injury from such causes, partly because the special

organs within the pelvis are so slightly developed that they are less susceptible to injury, and the pelvis itself in childhood is of such size and shape that its contents suffer less from the pressure, and partly because the muscular strength of the child being less, it is incapable of producing so great a strain. On the other hand, while the organs of a girl just entering womanhood are in a specially susceptible condition, her ambition to fill the part of a woman often leads her to overestimate and over-exert her strength, and she is liable to injure herself by a strain that a maturer person might bear safely.

The previous habit of the individual makes a great difference in this as in other things. Those who have been inured from early life to heavy work bear it better than those who have not. We often see girls and women of a certain class doing work that would speedily kill others of the same age who have been differently brought up, if they should undertake it. At the same time, it must not be imagined that the training which fits such women to do their heavy work is free from

danger. Vast numbers of them break down while forming the habit of hard labor, like the ancient Greek's horse that died of starvation just before fully acquiring the habit of living on nothing; and the hospitals of all large cities are filled, in great part, with girls and young women belonging to what we call the laboring class, who have been brought there by the strain of heavy work.

Sweeping is an exercise that calls the abdominal muscles into play as well as others. It produces no violent straining of them, however, and is not injurious to those who are in vigorous health. There are many girls, however, who are not very strong, to whom this exercise is an injury if long continued. The muscles become exhausted, and unable to furnish the accustomed support to the abdominal organs, which suffer for lack of it, and also through sympathy or from the general fatigue. If sweeping causes a pain in the side, or a faint, sick feeling at the stomach, it is a warning to cease. In all cases, it is best to so arrange the work that it shall not be necessary to sweep for a long time

continuously. The plan which some have, of sweeping the whole house on certain days of the week, is an unwise one, unless the house is very small, as it is almost certain to induce great fatigue, and sometimes causes permanent weakness or other injury.

Outside the domain of household duties, a much larger scope of action is open to women now than formerly, and the tendency is continually to enlarge the field. Not a few women are entering the ranks of the medical profession. Many suppose that women are naturally better adapted to nursing than men, and that, therefore, they should make better physicians, and especially that they are, for various reasons, better adapted to become the physicians of other women, and of children.

In point of fact, however, this is one of the most arduous departments of a very laborious profession, and comparatively few women could safely undergo the exposure and fatigue incident to a full practice in this branch of medicine. There are other departments of medicine in which women could engage more safely, and with much better prospect of ultimate

success, provided they took the time and pains to thoroughly qualify themselves.

But let no girl think she can reap abundant success as a medical practitioner unless she is willing to make a much fuller preparation for the work than the majority of those who enter upon it do make. That it is possible for one who will make such preparation to succeed largely is shown by the fact that there are a few who stand shoulder to shoulder with the most eminent men in the profession, and that, notwithstanding they had to contend with greater difficulties in the work of their preparation than meet the beginner now. There are, too, some who are notably successful in the treatment of women and children, although not every one could be.

Perhaps the greatest obstacle to the success of women in the medical profession is to be found in the fact that, whereas most women as well as most men marry sooner or later, the cares and incidents of married life, and especially of parentage, interfere with its continuous practice by women in a way that does not occur in the case of men, so that

the majority of women who are physicians give up their practice after marriage—the consequence being, that a very large proportion of female practitioners are mere beginners, and, of course, the *average* of knowledge and experience among them being therefore low, very many people acquire a distrust of female physicians in general.

There is a large demand for women who are skilled nurses—far greater, indeed, than the few training-schools now in existence can supply. Those who are thoroughly qualified receive as much for their services as a very considerable proportion of the physicians throughout the country derive from their practice. Only thoroughly healthy and fairly strong young women, however, are suitable to enter this vocation.

Of other professions little need be said. With the exceptions of the military and naval, there are no special reasons in the physical character of women why they should not adopt any to which their peculiar talents or tastes may incline them. In regard to the various vocations not commonly designated

as professions, but collectively known as "business," the principles already brought out will serve as a general guide. To most departments of mercantile business, and to many trades, most women are physically nearly as well adapted as men, and in some European countries are much more generally engaged therein than in this.

In many stores where women are employed to sell goods, as well as in some factories and other establishments employing women or girls, they are obliged to stand constantly. This is very bad, apart from its general wearying effect, for the constant pressure of the abdominal organs upon those within the pelvis, combined with the weakened support of the tired muscles, tend to produce displacements of the womb and other disorders. These dangers are greatly increased if the hands are occupied in lifting heavy goods to and from high shelves, or in handling heavy machinery.

In some countries women are employed as farm-laborers, and in some parts of this country it is not unusual to see them working in the fields, though nearly all who do

such work here are foreigners. An exception to this rule exists in many districts that are largely devoted to the raising of small fruits for market, where, during the ripening season, native girls and women are largely employed as pickers. There is no physiological reason why they should not do such work as this, and many other parts of farm-work as well, if they wish to, or if need require, though much of the work on a farm involves heavy lifting and straining, and is therefore unsafe for them.

CHAPTER VI.

AMUSEMENTS.

THE desire for amusements is so nearly universal that it would seem at first scarcely requisite to argue seriously for their necessity. Yet, as a few people hold a real or affected contempt for all amusements, and as many other people are thereby led to regard them as mere concessions to human weakness, having at best no value beyond a passing and frivolous pleasure, it is worth while to inquire what their true relation is to the health of mind and body.

At the outset of this inquiry two considerations stand self-evident, or so nearly that as to need no demonstration here, and upon these the whole question of amusements depends. First, the proper purpose of an amusement is to afford recreation ; that is to say, relief from

the weariness of some other action. For instance, the scholar, after an hour of studious confinement, finds amusement in conversation or in the rapid exercise attending some physical sport, while one whose occupation consists in physical exercise finds amusement in sitting down to read. Second, some amusements may be in themselves injurious, and, if so, are certainly to be avoided. For instance, one might find amusement in playing with some poisonous plant, in walking through a district where the air is fever-laden, or in any one of a thousand ways wherein the advantage of the recreation will be balanced or more than balanced by the evil directly connected with the amusement.

The lower animals have their amusements, all of them, at least, that possess any considerable degree of intelligence, and it seems to be a general rule that the greater the intelligence of the animal the more numerous and diversified are its amusements. Animals of small intelligence, such as fowls and rabbits, have little amusement beyond an occasional scamper or a mock battle, actions which are of

similar character with the serious concerns of their lives, differing from these merely in being free from all constraint and care, executed wholly as a matter of pleasure, and continuing only while they afford pleasure. These are, indeed, the chief points of difference between an amusement and a task. But animals of larger intelligence add an element of humor to their amusements; and man, having greater intelligence than any other animal, has also the greatest variety in amusements.

The young require and usually obtain more amusement than those who are older. One reason for this is, that the powers of mind and body, being feebler in the young, are sooner exhausted by action and require more frequent recreation. Another and perhaps the principal reason is, that for the young amusement has another purpose besides recreation, that purpose being the development by exercise of those very powers which are afterward to find their principal exercise in doing life's work.

The kitten toys with a string, or chases a flying leaf, to strengthen by use the mus-

cles that will enable the cat to spring upon and seize the animals which form its food. The puppy romps with whatever playmate comes in its way, to gain that wonderful strength of wind and limb that the dog will maintain by guarding his master's flock or following that master from place to place. The colt paws and prances, to nurture a frame that may bear the horse's burdens. So the child builds piles of blocks, digs in the sand, or gathers colored pebbles, and in so doing develops powers of observation and comparison that afterward find exercise and growth in the tasks of the school-room and of life.

Many amusements of childhood are of this class, and are therefore outgrown as soon as the powers to which they minister are sufficiently formed to gain their needed exercise by real work. But amusement for the purpose of recreation is never outgrown, and, the more severely the faculties are concentrated on any task, the greater is the need of such amusement. Consequently, we find that the greater the development of thought among men, and the more intense the effort of their

lives, the more advanced, in short, their civilization, the more abundant are their amusements.

The savage is but very little above the brute in his amusements. He runs, dances, shouts, wrestles with a companion, or vacantly watches the smoke curling above his pipe. Civilized men and women of low intellectual culture are not much in advance of savages in this regard. The fact that they live in civilized society insures their acquaintance with other classes of amusements, but those which most interest them and best supply their need are, as in the case of savages or of brutes, sportive copies of the motions that make up the labors and strifes of their life. Even when they converse, their ideas rarely range beyond the daily routine of that which their muscles perform; and to tell what they did yesterday, what they will do to-morrow, and what their neighbor is doing, is the sum of their talk.

Those who do intellectual work need intellectual amusement. If their work is wholly intellectual, or nearly so, they certainly need physical amusement too, even more impera-

tively than those whose work is wholly physical. But the need of a working mind for amusement is greater than that of muscles, for the mind differs from the muscles in the fact that when once set at work it is not readily stopped, and therefore mental diversion is necessary to give it rest.

Not unfrequently it happens that the mistake is made of taking for an amusement an exercise which is too severe, and which, by the heavy tax that it lays upon the powers of the individual, has all the effect of a task. Thus what is amusement to one is labor to another. For example, Pollok says, in the fifth book of "*The Course of Time*," when describing the joys of earth:

"It was, indeed, a wondrous sort of bliss
The lonely bard enjoyed when forth he walked,
Unpurposed ; stood, and knew not why ; sat down,
And knew not where ; arose, and knew not when ;
Had eyes, and saw not ; ears, and nothing heard ;
And sought—sought neither heaven nor earth—
sought naught,
Nor meant to think ; but ran, meantime, through
vast
Of visionary things, fairer than aught

That was ; and saw the distant tops of thoughts
Which men of common stature never saw,
Greater than aught that largest words could hold,
Or give idea of, to those who read."

It is true, as the poet says, that such thoughts are only possible to persons of great mental stature, and of these only the most active minds can find true amusement in them, for to all others the mere attempt to grasp such great thoughts is a wearisome labor. To be sure, the less active minds are not very apt to become wearied with this high form of reverie, because they are not very apt to undertake it. Our reveries are naturally adapted to the ordinary scope of our minds, and a mind whose ordinary range is bounded by the foot-hills of thought is not likely in hours of idleness to wander among those "distant tops" that pierce the clouds above a common life. But the conditions illustrated in this belong also to other forms of amusement which are frequently attempted by those who are not capable of using them as amusements.

Such is the game of chess. To play it tol-

erably requires close attention, much study and calculation, and severe exercise of the reasoning faculty. Most persons of cultivated mind are capable of such effort, but few can make it without in some degree exhausting their power for other mental effort, so that, although it may be to them a pleasing exercise, it is more of a labor than a recreation. There are some minds of sufficient grasp, activity, and balance, to really play at chess without working at it, using it as a wholesome diversion from other mental exercise, yet never becoming occupied with it to the point of fatigue. Yet it is a game of capacity to tax the highest power, and few who become interested in it are content to spend small effort upon it. Therefore it is generally not profitable for those whose work is chiefly mental, except it may be during a vacation, when there is less need of rest than of a change of mental occupation.

So largely, indeed, does it usually engross the mental powers, that many excellent players have finally given up playing it altogether, convinced that they must either do

that or give up their business ; and Paul Morphy, at one time the finest player in the world, is said to have become insane from close attention to the game. At the same time it is one of the best of games for mental discipline, and perhaps sometimes available for that purpose when other means are not ; but mental discipline and recreation, though certainly not opposed to one another, are not closely connected, and usually other exercises than games are preferable for discipline.

In consequence of considerations such as these, and, moreover, because it is wholly sedentary, chess is among the games which are wisely excluded at some schools.

Many amusements are unsuitable for a similar reason, that they exhaust the powers, either mental or physical, too much to be serviceable as recreations. This objection is sometimes general and sometimes special. The instances just considered are of general unfitness, their effect being that of general mental fatigue or exhaustion. In a similar way others, such as severe gymnastic exercises, long-continued running, etc., may cause gen-

eral physical fatigue or exhaustion. But still others may in a special way exhaust or injure mind or body in certain individuals.

Thus, some minds are so painfully susceptible that the slight suspense of the contest in any game of skill or chance, and the excitement of winning or losing, fatigue more than an exercise requiring greater effort but lacking these conditions; and many bodies have some defect in circulation, or weakness of some particular organ, in consequence of which very moderate physical exercise may, if it affects that defect or weakness, have the effect of great exhaustion. For example, a person having heart-disease, although perhaps quite as strong and agile as another whose heart is sound, or even more so, may be greatly distressed and exhausted by a short run that would scarcely flush the face or quicken the breath of the other.

So, in amusements as in other things, "one man's meat is another's poison," and, while variety of taste prompts to a choice, regard must also be paid to some necessities not indicated by taste. Fortunately, the range is

so great that an ample variety can usually be found, approved by both the taste and the health requirements of each individual. It is not easy in this to lay down strict rules for another, and it is only possible here to indicate general principles and their application to a few forms of amusement.

The same rules that govern the relation of woman to the various forms of physical labor apply in equal degree to her physical amusements. As a rule, she is more likely to have too few of the latter than too many, but more care is necessary on her part than on that of man in their choice and extent.

Nearly all girls need more out-of-door amusement. They should walk and run as their brothers do. There is every reason for a girl's running that there is for a boy's, and she is as well formed for it as he, unless her form has been distorted at the dictate of an unhappy fashion. Among the lower animals the female is often swifter than the male. This is notably true of race-horses. It is significant, too, that the ancient Greeks, who surpassed all other nations in physical culture,

in their mythology named Atalanta, a woman, as the most fleet-footed of mortals.

Owing to social customs and other conditions, many girls walk very little and run scarcely at all, though of late years the general tendency has been toward improvement in this respect, and in the use of many open-air sports by girls and women, such as croquet, lawn tennis, archery, horseback-riding, rowing, etc. These are generally beneficial, though the more active, as lawn tennis, riding and rowing, are unsafe in excess, and all are subject to the general limitations already mentioned.

There is one special danger in connection with rowing that ought to be generally understood and guarded against. The action in pulling the oars is almost precisely the same as in lifting a weight in the hands from a stooping to an upright position. The body is first bent forward toward the feet, the arms being extended in front and the knees bent. The knees are then straightened, the feet being braced, the arms are drawn toward the chest and the body thrown back. In this

action nearly all of the most powerful muscles of the body and limbs are made tense, including those of the chest and abdomen, and there is a strong pressure upon the internal organs. There is no harm in this if the organs are healthy and the action moderate, but otherwise there is a liability that the womb may be displaced. For this reason girls when rowing should never engage in a race or task their strength to the utmost.

Bathing for amusement, as it is generally done at our summer watering-places, is nearly always bad in its tendency. There is a very common notion that salt water never injures health as fresh water may. This is a mistake. Other things being equal, one is not quite so likely to take cold in salt water as in fresh, because the salt stimulates the skin slightly, and one can swim with less fatigue in salt water if it is free from waves, because it is heavier and therefore more readily floats the body than fresh water. But, as very many people drown in salt water notwithstanding its weight, so do a vastly greater number take cold in it, notwithstanding the salt. At most

of the summer resorts on our Atlantic coast the sea is too cold for comfortable or healthful bathing during a considerable part of the season which fashion prescribes for spending in these places.

But the commonest injury that is received from such bathing is not an ordinary "cold," but a depression of the vital powers resulting from long immersion in the water. This is shown by chilliness, blueness of the lips and lassitude, and sometimes by headache or nausea. It occurs more rapidly in proportion as the water is colder, and much sooner in feeble persons, or those whose blood does not circulate freely, than in those who are robust.

Some persons may be in the water for half an hour or more without being thus affected, but these are comparatively few, and there are others who can scarcely endure more than a single dip with safety. In general, it may be said that on the coast of our Middle States a sea-bath should be from three to fifteen minutes in length, and probably there are many more girls who would be benefited by a bath of less than ten minutes than there

are who would be benefited by one of more than that time. It is not the chill of the first plunge that is harmful, except to very feeble persons. If there is sufficient vigor to react against this, and cause, on coming out of the water, a pleasant glow of the surface of the body, with warm hands and feet, the exercise has been a good one; if otherwise, bad; and this should be the test as to the time of remaining in the water.

Another and a very frequent source of injury in sea-bathing is the motion of the water. In a calm day and upon a smooth beach the long waves roll with a force that is surprising to one who has not known it, and when raised by a moderate wind they will severely tax the strength of the strongest man. Adventurous swimmers, going outside of the surf-line, and rising and falling with the waves, do not of course feel their force as those do who stand cowering upon the sand, with every moment a volume of water weighing perhaps half a ton rushing against or falling upon them.

In view of all the facts, therefore, when

delicate girls and women permit themselves, as many do, for an hour or two each day of several weeks, to be drenched, pounded and tossed by ocean-waves, their bodies meanwhile feeling chilled to the marrow, and generally a fierce sun beating upon their heads, it is no wonder that some of them conclude that sea-air does not agree with them.

Skating is an amusement that has much in its favor and some decided disadvantages. It pleasantly exhilarates without fatiguing the mind, and at the same time gives free play to very many of the muscles. It quickens the circulation and insures the breathing of fresh air. But that air is necessarily cold, and the very fact that it is breathed in increased quantities makes it somewhat likely to affect the lungs or air-passages injuriously. It has often happened that a more or less serious inflammation of some of these parts has resulted from skating. The feet, too, are exceedingly apt to suffer from cold, especially if the skates are fastened by straps, as these constrict the feet and check the circulation of blood in them. On this account, skates

which fasten to the soles of the shoes are better for the wearer, though perhaps not so good for the shoes.

Very much of the danger incident to skating may be avoided by observing the simple precaution of keeping the mouth closed constantly while skating and afterward until home is reached. All the air which reaches the lungs is thus made to come through the nostrils, and in the long, narrow, and winding passages which intervene it becomes partly warmed. If the mouth is opened, as in talking and laughing, a great volume of cold air rushes almost directly into the lungs, where the violent contrast of its temperature to that of the heated blood which the unusual exercise sends surging through them is very apt to make mischief.

For this reason skating-parties, where the amusement consists largely in the merry conversation and laughter that seem to belong to such gatherings, are less desirable than separate and therefore quiet indulgence in the exercise.

Another precaution of very great import-

ance is always to walk home after skating. Many cases of serious and even fatal sickness have followed the chill occasioned by a drive of fifteen minutes in a carriage or sleigh through the wintry air after getting warm and tired by skating. When possible, too, an extra wrap of some kind should be carried to the skating-pond, to be worn home. Of course, no one who values health will sit down on the ice, or elsewhere in the open air, to "cool off," or to rest, when wearied by the sport. When need of such rest is felt, it is time to go home.

Dancing is in itself an excellent exercise and recreation for both body and mind. It is, however, nearly always carried to excess, and its common accompaniments of extremely late hours, indigestible suppers, insufficient clothing, and sudden changes from overheated rooms to chilly night-air, are anything but conducive to health.

Receptions and parties of various kinds, picnics, excursions, theatres, operas, and the like, afford a pleasant break in the monotony of many lives, but are apt to cause too much

weariness to afford immediate benefit in the way of recreation, even though they may be altogether pleasurable. Their chief advantage, apart from direct social or educational considerations, is in affording themes of after-amusement in thought and conversation. For this purpose they are more effective, if not sufficiently frequent to wear the edge of novelty.

What constitutes such frequency varies so greatly in different cases that it is impossible to give anything like a general rule. Some may derive most benefit from only three or four such entertainments in a year, and others from thirty or forty. It is even possible that the immediate excitement of a continuous round of such entertainments may at times be beneficial to some persons, but such cases are very rare, and when they exist the persons to be thus benefited are not likely to seek the excitement; for, when there is a craving of excitement for excitement's sake, it is a pretty sure sign that the excitement will be injurious.

Amusements should complement the general occupation, as colors complement one

another. Not only should the action of an amusement be different from that of the occupation, but there should be a kind of harmony between them, which will insure symmetrical development. A person whose occupation is sedentary commonly requires more active amusements than one whose occupation is active, yet the former is more likely than the latter to be injured by too great activity in amusements. A student may get only discomfort and harm from a game of foot-ball that a farm-laborer would thoroughly enjoy and profit in. On the other hand, the farm-laborer may only be bored and tired by a game of logomachy that would be a delight and gain to the student.

It is far from the truth to suppose that all students would be injured by playing foot-ball, and still more so to suppose that all farm-laborers would fail of being interested in logomachy; yet the fact that it is sometimes so illustrates a principle concerning amusements, that while some, of a nature very diverse from one's occupation, are useful and necessary, still, when their object is mere rec—

reaction to the wearied powers, without reference to the discipline and development of other powers, there is special advantage in such as are somewhat allied in character to the occupation, provided they are not identified with it too closely. Thus, a person tired with muscular exercise may often find another form of muscular exercise refreshing, even when it is done as a labor, and much more when it is done as a sport. In accordance with this principle, it is said that horses on hilly roads last much longer, even though their work is much harder, but affords variety in the exercise, than they do on level ones where the muscular strain is always in one direction. Again, a person tired with mental work, if not in present need of muscular exercise, may often find the best relief in some other form of mental occupation.

Such change not only distributes the sum of action among different powers or organs of mind or body, and so passively relieves those that are wearied—it actively relieves them also. Weariness is an effect produced by the wearing out of certain particles of brain or body

in their work. This waste is made up by fresh particles taken from the blood. The antagonizing processes of waste and repair are constantly going on during life. In action the former predominates; and in rest, within certain limits, the latter. But action in any part always increases the flow of blood to that part, so that the process of repair is really more rapid during action than during rest, and it is only because the process of waste increases at the same time in still greater ratio that exhaustion follows action.

But if one set of muscles in the arm are wearied, and while allowing them to rest we exercise another set of muscles in the same arm, the flow of blood to that arm continues to be increased, and the wearied muscles are repaired faster than they would be if the arm remained entirely at rest. So, when the brain is wearied, if we occupy it on a subject engaging other faculties than those which have become exhausted, the blood continues to flow through the brain more freely than when it is wholly at rest, and we get the effect of recreation.

On the other hand, if with a tired brain we engage the body in severe exercise, and especially if it is an exercise to which we are unaccustomed, and which, therefore, is performed with constraint and difficulty, the blood is partly withdrawn from the brain to help the body, and the growing fatigue of the latter adds in effect to the unrelieved fatigue of the former. A similar result is apt to follow when one with tired body engages in unusual or severe mental exercise.

Thus it is that scholars are apt to find their principal amusements in affairs which involve mental exercise, and those who are not scholars naturally seek theirs in exercises more purely physical. This principle, however, does not in any degree obviate the fact that both brain-workers and muscle-workers need a certain considerable amount of exercise of the other kind, less perhaps for pure amusement than for symmetrical development of mind and body and consequent general health.

An important point for those who are engaged in the work of the house is to so systematize their work that they shall have sufficient

and regular time for out-of-door exercise and recreation as well as for rest. It is very commonly and loosely asserted that the domestic duties of women are more monotonous and confining than the occupations of men. They are not intrinsically so, at least in the case of women who are not mothers. The more one learns of the various trades and professions by which men obtain the means of living, the more apparent it becomes that in each a wearying monotony is the rule. There can hardly be a more monotonous occupation than that of book-keeping, in which very many men spend the greater part of their waking hours from the time they leave school until they die. In other departments of masculine labor, from hod-carrying to sermon-writing, there is one unvarying round—doing the same things in the same way over and over and over again, hour after hour, day after day, and year after year. In some of these occupations the hours of labor are less than for most housewives, but in others they are more. It will be found a general rule, to which there are very few exceptions, that the

more arduous the work the less are the hours, and *vice versa*.

But it happens that the business of men is generally away from their homes, or at least not essentially connected with the scenes of home-life. With women who are housewives it is different. The food that they cook, the rooms that they sweep, the furniture that they dust, even to the beds on which they sleep and the books, pictures, and musical instruments that are intended to afford them recreation, become for them so closely associated with their daily routine of labor that it is necessary that they shall go out in order to break the association and obtain complete rest.

Besides this, the kitchen is often poorly lighted and not well ventilated, and the housewife's dread of flies and faded furniture in summer and of cold air in winter often leads to the exclusion of sunshine and fresh air from the rest of the house during the greater part of the time, while, her work being nearly all within the house, there is little to take her into fresh air and sunlight, and even when

she does go out it is very commonly on some housekeeping errand that occupies her mind to the exclusion of any considerable recreative benefit.

Every girl or woman, then, who is occupied with household cares, should so arrange these that she may spend a part of each day in absolute freedom from them and in the open air. It is not generally needful, nor indeed best, that this time should be spent in absolute idleness. For some the raising of flowers or even of table vegetables, or the care of fowls or other animals, will furnish sufficient diversion. Others will find their largest profit in the pursuit of botany, mineralogy, or some other out-door study. In cities, visits to picture-galleries and to other places of profitable entertainment will attract many, while in both city and country a reasonable amount of time should be devoted to social intercourse.


Of the various occupations suggested for these leisure hours, and of many more which will suggest themselves, those only are suitable to any individual which appeal to the taste of that individual as entertainments. Those

which partake of the nature of tasks will fail of their object. Other things being equal, those recreations are best which will give the largest amount of out-of-door life and the widest departure from the range of ideas embraced in the daily routine of work.

Although amusements are so much needed, it sometimes happens that the system gets into a condition where it can not afford them, just as some people may be financially in a condition where they can not afford salt on their potatoes, although salt is so necessary to health. For example, some persons, either from necessity or choice, give themselves unremittingly to some form of mental or physical labor as long as they are capable of effort, and, when they cease, their weariness demands utter and immediate rest. This being continued day after day, the whole system becomes so exhausted that amusement is impossible. If the labor is intermitted for an hour, the person falls asleep, or at least is unable to fix the mind on any amusement with real interest. The face is somber or anxious, and the very attitude expresses weariness and de-

jection, like that of a jaded horse that has forgotten that life holds anything more than a heavy burden and a long road. The same result is sometimes produced by insufficient food, and for the same reason, that all the power that is produced in the system is used up in the mere process of living and in the enforced labor, and there is none left for amusement.

But even as the overworked and underfed horse can neither go so far nor carry so much as the animal that has vigor to spare for a little sportiveness, so the work of a person who has reached this condition must always be inferior in amount and quality to that of one who saves a little time and strength for amusement.



CHAPTER VII.

SOCIAL CUSTOMS.

SOCIAL life necessitates many habits and conditions which are artificial, and which modify in varying degrees the progress of natural events. It is, however, an error to suppose that all which is artificial is unnatural, or that anything is unnatural merely because it is artificial. That only is unnatural which is radically opposed to the purposes of nature. It is not even necessary that an act should be artificial in order that it should be unnatural. For example, certain animals destroy and eat their own young. This act is not artificial, but it is unnatural, because it is subversive of a great natural purpose. On the other hand, the grooming of horses is artificial, but it is not unnatural, being consistent with the purposes of nature, though

it may somewhat modify their development. The true object of art is to assist, refine, ^{or} improve natural development. Unfortunately, art does not always keep this object in view.

All forms of dress, every kind of cookery, light other than that of the sun and stars, the heating of houses by means of fire, the houses themselves, and objects and usages innumerable, belonging to civilized life, are artificial and modify in varying degrees the operation of natural laws. Indeed, art is not only a necessary factor in civilization, but a large element in savage life, and it is even extremely doubtful if human life could long continue in any circumstances without its intervention. We have, then, to consider the artificial conditions in which we are placed as in some sense an adjunct to nature, and a necessary part of our belongings.

Social usages modify to a very great extent the development of womanhood—sometimes, but not always, injuriously. The influence of habit is so great, that in many respects a woman's life may be made to conform to customs of society involving considerable

able deviation from the strict course of nature, without either good or bad results being apparent. This, however, is only within certain limits, beyond which, any change, not in accordance with the purposes of nature, will have a bad effect.

The fashions of dress afford very good illustrations of these facts. Round the neck, or over the shoulders, the clothing is often thicker and more close-fitting, and round the waist it is nearly always thicker and more close-fitting, than in other parts. There is no natural reason why these parts should be kept warmer than adjacent parts of the body, and, without the accommodation of habit, such unequal distribution of warmth would be very uncomfortable, and even unhealthful, yet ordinarily it is not so in any great degree. The parts so warmly clothed become accustomed to it, and if they are divested of a part of their covering, even though they may still have as much as other parts of the body, it sometimes happens that sickness is the result. Again, the fashions in regard to the covering of the neck frequently change,

so that at one time dresses are worn which come up high on the throat, and at another they are open low down upon the bosom — Custom rapidly inures to these conditions, so that comparatively little inconvenience is felt, although even so slight a thing as laying off a neck-ribbon or a necklace not unfrequently produces a cold at first.

A chronicler of Eastern legends tells the story of a monarch who, seeing one day a shepherd in the fields, inquired about his mode of life, and finding that the man slept on the bare ground, exposed to every kind of weather, that he was scantily clothed, and yet never took cold or was sick, remarked that the poor people were so much hardier than the higher classes that there must be a great difference in their natures. One of the wise men of the court replied that the difference was entirely of habit. The king, desiring to test the correctness of this view, had the shepherd brought to court, where, for some months, he lived in the same manner as the nobles, never being exposed to fatigue or to inclement weather, and his person being in

all respects most tenderly cared for. At the end of this time the king directed that the shepherd be taken into a room, the marble floor of which had just been sprinkled with water, and that he be engaged in conversation there for half an hour. This was done, and a few days later the king inquired for the man, that he might see the result of the experiment. To his astonishment he learned that the poor fellow was dead. Standing on the sprinkled floor had made the soles of his shoes damp, in consequence of which he had taken a violent cold and died. Whether the story is historically true or not, its double moral is certainly correct: that many of the refinements of civilization are purchased at the expense of vigor or hardihood, and that the nature of man soon adapts itself to the circumstances in which it happens to be placed. This, however, as has been already said, is only within certain limits. To force a habit beyond these limits is to invite disaster.

The evils of tight lacing have been often commented on, and many illustrations have

been given of the terrible effects of this practice. In spite of all that can be said, however, if fashion demands it, women will continue to be deformed in this way. That it is a deformity is beyond denial. Classical statues and paintings of Venus, and other representations of perfect female beauty and grace, all have the waist full, with only a gentle inward curve at the sides, instead of the sharply pinched waist of modern society, which gives to the upper part of the body the appearance of an inverted cone.

This unnatural compression is often spoken of as forcing the lower ribs together, and pushing up the diaphragm by constant pressure upon the abdominal organs, thus doubly confining the motion of the lower part of the lungs and consequently impeding breathing, and assisting, if not producing, various diseases of the lungs, as well as eventually producing permanent distortions of the ribs and spine, and often seriously interfering with the action of the heart and liver. All this is true, and more, for the compression of the waist exerts a pressure on

the abdominal organs, downward as well as upward, and is thereby the direct cause of many disorders of the womb. Often this cause of diseases of the womb is overlooked, and oftener yet, when the evil is discovered, it is too late to apply the remedy.

Tight lacing will not cause a woman to suffer from shortness of breath equally with a man, because nature has provided that, in a woman, breathing is effected principally by the motion of the upper part of the chest, while in a man it is done chiefly by the motion of the diaphragm and abdominal muscles. This provision, however, does not prevent the lungs themselves from sustaining serious damage in this way, nor does it at all lessen the amount of injury inflicted on other parts. Moreover, the provision itself is a safeguard of nature in certain possible conditions of a woman's life. It is a prevision against the pressure within the abdomen in the event of maternity, and if this pressure is forestalled by tight lacing, even if no immediate ill effects were felt, the life of both mother and child may one day pay the

penalty. This may be, too, although tight lacing has been discontinued long before maturity is possible, for the body once deformed in this way never regains its original perfect form.

By tight lacing should be understood not only a degree of constriction approaching the limit of endurance, but every degree of tightness which causes pressure upon the abdomen, or confines the movements of the body. Everything round the waist should be loose enough for the entire hand to pass easily under it. Dresses that "fit snugly" about the waist are too tight.

If corsets are to be permitted at all, they should be loose enough to be easily moved up and down on the person, and should have no constricted portion, or sharp inward curve, the front being straight except where it enlarges to support the breasts, and the sides nearly straight, except where they enlarge at the bottom to cover the hips. They should be supported entirely by the projection of the hips and the natural curve of the spine, and not by compression of the abdomen. They

should also be made of soft and elastic materials, and not with steel or stiff whalebone.

Quite frequently, when tight lacing is not practiced for its own sake, or when, strictly speaking, it is not practiced at all, the waist is constricted as a means of supporting the under-skirts. This is full of harm. In the first place, heavy under-skirts, or many of them, should never be worn, both because, whatever kind of support is devised, their weight is a burden which is worse than inconvenient, and because they do not adequately protect the lower extremities from cold, especially from currents of cold air. For this purpose, drawers should be worn of sufficient thickness to keep the legs comfortably warm, whatever the weather, and both they and such skirts as may be necessary for the sake of appearance should be supported in the same manner as the corset when it is worn, by the projection of the hips, or, better still, by buttoning to the garments which hang from the shoulders. The latter mode of support is not easy when very low-necked dresses are worn, and, for this reason, among

others, dresses made in that fashion are objectionable.

The frequent and extreme changes of fashion in the matter of ladies' hats and bonnets, and in the style of arranging the hair, are very unfortunate. At one time a hat is worn low upon the forehead, and the back of the head is left exposed; again, the covering is set back upon the crown, and the forehead and top of the head are bare; during one season the whole head is enveloped in a huge bonnet, which, during the next season, is replaced by a slight affair that rests on the top of the head, and does not so much as cover the ears. In dressing the hair quite as much diversity occurs. At one time it is massed over the back of the neck; at another, on the crown or just above the forehead. Now it is gathered about the ears, and now carefully brushed away from them.

Any one of these fashions would be comparatively harmless if it were continuous, as habit would soon inure to it, though some of them are so far from the natural design of protecting the head from heat and cold that

they could never be wholly comfortable and safe. But the great danger is in their frequent changes.' Among other evil results, many cases of neuralgia of the head or face, and of deafness, are owing to this cause. It is not to be expected that such changes of fashion will be discontinued, and some conformity to the prevailing fashion is a social duty as well as a necessity, but there is neither duty nor necessity to make these changes so sudden and extreme as they often are. Especially unsafe is it to make such changes in cold weather.

The wearing of veils is in general bad for the eyes, and should in ordinary circumstances be avoided so far as possible. This is especially true of black crape and other dark-colored and thick veils, of those which are figured, and those which are drawn tightly over the face. The dark and thick ones keep the eyes in a perpetual twilight, and therefore perpetually strained. This evil belongs, indeed, in greater or less degree, to all veils worn over the eyes. The figured ones render the light uneven, and constantly at-

tract vision to the figures, by which means they greatly fatigue the eyes, and have been thought, in very numerous instances, to produce near-sightedness. Closely drawn veils, besides having the disadvantages of loose ones, interfere somewhat with the evaporation of moisture from the eye, and promote inflammation. There are, indeed, some conditions of the eyes, or of the surrounding air and light, that make the use of veils necessary at times, but this should always be determined by a physician.

The use of cosmetics can hardly be called a social custom, for, though it is unfortunately very common, the better sense of society is decidedly opposed to it, and it is done in a sort of secret way. At least, it is generally supposed to be a secret by those who do it. Many ladies, indeed, use face-powder frankly, more as a convenience than as a true cosmetic, their object being to arrest perspiration, prevent sunburn, etc. When magnesia or rice-powder is thus used there is no more objection to it than to any other kind of dust or dirt with which the skin might be covered.

Like all others, they make the skin dry and rough, partly by absorbing its natural moisture and partly by mechanical irritation, and, by clogging the pores and checking the perspiration, they tend to make it sallow and promote pimples, but they are not poisonous, and do no other harm. The same can not be said of the various washes, lotions, enamels, etc., that are used for beautifying the complexion. Notwithstanding the abundant guarantees and testimonials under which they are sold, all of them are highly objectionable, and most of them contain dangerous quantities of arsenic.

The shoes commonly worn by women are the cause of a vast amount of suffering, and a great deal of ill health. The foot is a wonderful piece of mechanism, in the form of an elastic arch, the instep being the middle or highest point of the arch, and the design is, that the heel and toes, being the ends of the arch and resting on the ground, shall support the entire weight of the body. According to the laws of mechanics, the middle of the sole, representing the middle of

the inside of the arch, is the part of the foot least able to endure pressure, yet, in very many of the shoes made for women, the heel, in order to make the foot look small, is placed under this very part, causing the whole weight of the body to be borne by the weakest part of the foot. Then the heel is made very narrow and very high, causing a severe strain on the ankle to preserve the balance, and making the foot slide down and forward toward the toe of the shoe, and the shoe is made as narrow as possible, especially at the toe, painfully cramping the toes, and, indeed, the whole foot. The consequence is, that walking is difficult and uncomfortable, and is therefore avoided as much as possible, and the whole body suffers for want of exercise, while the foot itself, being distorted and pained, develops corns, bunions, inflamed joints, and in-growing nails. Besides this, the raised heel throws the weight of the body forward, and, by thus lessening the support of the abdominal organs, tends to produce or aggravate disorders arising from this source.

The heel of the shoe should be broad, flat,

very low (not more than half an inch in height at the utmost), and should be placed well back under the heel of the foot. The sole of the shoe should be broad, especially at the toe, and thick enough to protect from cold and damp. If the sole is sufficiently broad, the upper may be as tight as it can be worn, without danger of producing corns. A narrow sole, with a loose and ill-fitting upper, is the form of shoe most likely to produce them.

It frequently happens that school-girls, about the time when the menstrual function is becoming established, feel generally unwell, and disinclined to much study, or to any great exertion. Often they suffer a good deal from headache, or from vaguely defined pains in various parts of the body and limbs. Sometimes the attempt to study makes them unreasonably drowsy. At other times it excites and makes them restless and irritable. Usually the complexion changes to a pallid, and often a slightly greenish hue. In consequence of the frequency of this symptom the condition is very commonly called "green-

sickness." As in other forms of sickness, the appetite is apt to become impaired or irregular, and sometimes capricious, so that unnatural or unwholesome kinds of food are desired.

Such symptoms indicate that the powers of life are probably overtaxed by the double burden which they are made to bear, and that it is necessary to make some concession to the new and great development which is taking place at this time. Sometimes, by judicious medical advice, the difficulty may be overcome without interfering seriously with the course of study, but in other cases, and these not a few, it is absolutely necessary to give up school-life for several months, or even for several years, until the new function be thoroughly established, and all the organs concerned in it fully matured. This necessity will be more readily apparent when what has been said of the very extended and acute nervous sympathies of the reproductive organs, and the very importunate demand they make upon the general forces, is remembered, with the added fact that mental labor is real-

ly more exhausting than labor of any other kind.

Such a state of things were a great calamity to woman if her position in life were the same as that of man, or if her necessarily different position denoted inferiority. But neither is the case. It is not even desirable that man and woman should occupy the same place in the world. Both nature and society assign them to different lots. Girls develop more rapidly, mentally as well as physically, than boys. The mental perception of a girl of fourteen or fifteen years is generally much quicker than that of the average boy of the same age, and her intelligence greater. This difference increases for several years, so that at eighteen or twenty the girl is practically, in many respects, three or four years in advance of the boy. This advantage often enables young girls to outstrip their brothers in their common studies, but afterward, as they develop more in other directions, they often progress in the ordinary studies of school less rapidly, if at all; and usually the applicants for admission to female colleges are

found to be not so thoroughly prepared as the applicants for admission to similar institutions for males. Nor has it so far been found generally practicable to maintain in the former institutions the same standard of study that is found in the latter.

It is true that one reason for this is the prevalent feeling that as women mature earlier than men, they should enter sooner on the ultimate realities of life, and therefore can not afford to devote so much time to the preliminary business of education. It is also true, however, that the womanly development itself often interferes with the course of study to such an extent that the latter must either be curtailed, or more time must be devoted to it than is generally necessary among men. The question is still mooted, whether the direct line of study which has been developed through centuries, with the express object of fitting men for their future life in the world, is equally adapted for the education of the feminine mind, or whether a system can not be devised more in accordance with woman's specific requirements and capabilities. This

question is hardly within the scope, and certainly not within the compass, of this work, and it will therefore not be meddled with. The present purpose is but to speak of existing known facts in their relations to woman's health.

The idea held by many, that women should complete their preparatory life-work early, in order to enter at once upon life's graver duties, is unfortunate. That girls should marry as soon as they are out of school is painfully absurd. The age at which a woman is fit to marry varies considerably in different countries, being generally earlier in warm than in cold climates. In this country no girl ought to marry under twenty years of age, and few are fit for it under twenty-two or twenty-three. Twenty-five years is always a far preferable time for marriage, to twenty.

The reasons for this are physiological. In the first place, the bones of the pelvis do not attain their proper size and form until some time after the individual has ceased to grow tall, and after the menstrual function is well established. In general, these bones are not

perfectly developed until the woman is upward of twenty years of age. If she should be married, and should become a mother before this occurs, the birth of the child will be attended with very great difficulty and danger to it and to her, and will even be not unlikely to occasion the death of both, from the narrowness of the outlet through which lies the child's way into the world. In the second place, maturity of strength and endurance do not come until some time after maturity of form and of organization has been reached. This is the natural order of things; and often, perhaps generally, the fullness of power is retarded in its development several years beyond the time when in the natural order it might otherwise appear, by the great drain imposed in perfecting the organization. If a woman marries before her strength is full grown, though her body may be, she will probably sink under the stress of child-bearing, added to the other labors and cares inseparable from married life.

Thus it happens that, whatever of differences may exist in mental development be-

tween the sexes, women are not physically fit to be married at an earlier age than their brothers, and the physical consequences of too early marriage are much more disastrous to the former than to the latter. It is generally thought that the husband should be a little older than the wife, to counterbalance the earlier maturity of the latter, for in common parlance "a girl is older at eighteen than a man is at twenty-one." This statement, in its accepted sense, is true, but the disparity grows less as they advance in life, and finally disappears.

If, however, girls do not marry until they are really fit to do so, and if, at the same time, the general sentiment remains unshaken, that men should be older than their wives, then those social scientists who are given to lamenting the general inability of very young men to marry and support families are deprived of considerable ground for argument, and by just so much is the fact made plainer that the progress of civilization is still onward, and the world is really not retrograding. If it be said that many early

marriages have been free from the evil consequences alluded to, it is simply such an argument as to say that many have played with edge-tools and have been unhurt, or that steam-engines have frequently been run at a pressure above the safety-point, and the boilers have not burst. Such things do happen, but the experiments are not safe enough to be worth trying.

CHAPTER VIII.

HARMONY AND ELEMENTS OF BEAUTY.

WOMAN'S place in the world differs from that of man, and she is endowed by nature with such peculiarities as fit her specially for her position. Less in stature and in physical strength, as well as in such mental qualities as are particularly adapted to the jarring encounters of a business life, to the competitive struggle for means of subsistence and emulation for the possession of power, hers is the fuller grace which fills and beautifies the bolder outlines of the man's work, and nourishes the germs of power that is to be. In this difference is no inferiority, but rather the variety that is necessary to companionship. As the world depends for its present progress on masculine force, so does it depend on feminine grace for its future pros-

perity. To this end the physical and mental attributes of woman are especially directed.

It has been said that, as among the lower animals the male is generally more beautiful as well as stronger than the female, the same fact exists in relation to human beings, and that the concession of the palm of beauty to woman is merely a gallant courtesy. This is not so. Among many of the lower animals, the female is little more than a humbler copy of the male. The lioness, equaling the lion in size and strength, and invested with his full mane and terrible voice, would be not a whit less majestic than he. The peacock's gay plumes and majestic carriage, bestowed upon his mate, would make her as beautiful and as much admired as himself.

But beauty depends on purpose. The peacock's plumes upon the lion would be absurd. So that which in woman is beautiful becomes ridiculous effeminacy in man, as that which is majestic in man is ungraceful and unbecoming in woman. The tenors of their lives differ, and their natures and constitutions differ accordingly. Among the lower

animals there is generally no true companionship between the sexes. The female is not a helpmeet for the male, with qualities radically differing from and supplementing his. She is only necessary for the purpose of perpetuating the race. For every other purpose the male is, in himself, sufficient, and for some he is better endowed than she; hence his greater beauty. In the case of men and women, however, there is the difference already noted, of purpose rather than of degree. Therefore, the beauty of the woman is not modeled on that of the man, nor to be measured by the same rules.

Few things are more difficult to define than beauty, and few things are more difficult to analyze or lay down rules for. It is true that we have some general rules of beauty, such as that curves are more beautiful than right lines and angles, that certain harmonies should be observed in colors, etc., but after all we can not arrange any exact system of forms and colors, and say that all within that system is beautiful, and all without it is otherwise. If we look through a

collection of portraits, we find among those that are equally beautiful wide differences of form and of color combinations. When we attempt to define beauty, we are reduced to the necessity of saying that it is something which pleases the beholder, and that it is therefore, to a very great extent, a matter of individual taste.

This is simply another way of saying that beauty consists in adaptation. If we follow the subject, we find that this idea enters, consciously or unconsciously, into all our conceptions of beauty. Even in those points on which the rules of beauty are seemingly fixed and arbitrary, this idea has a fundamental place. For example, the harmonies of color depend on the adaptation of certain colors to certain ends in the mechanism of light and vision. Form always conveys an idea of power in some sense, either to act or to resist action, and curved lines allow of greater power within a given space than right lines and angles.

It is true that in these instances we may be unconscious of the adaptation, yet we ap-

preciate the beauty which springs from it. In some other instances we can not appreciate the beauty of an object until we become conscious of its adaptation. We may look at some machine, and see in its complicated wheels, and shafts, and pulleys, and bands, only a conglomeration of ugliness, yet one who understands the adaptation of all these parts to one another, and of the whole to a purpose, sees in it a marvel of beauty.

So in regard to language. The beauty which we find in certain words comes only through their adaptation to some purpose. It may be that the words are peculiarly fitted to express a certain shade of meaning, and, if so, we experience, in discovering this fitness, the same pleasurable thrill that we feel in the presence of other forms of beauty. Or, it may be that the beauty of the words consists in their adaptability to the organs of speech, making them easy of pronunciation. The pleasure which we then have, simply in repeating or hearing them, depends on their adaptation to the character and constitution of our being.

A similar adaptation governs our conception of beauty in the persons of those about us. We often meet with people whom at first we dislike or pity for their ugliness, but, after becoming better acquainted, some qualities which they possess are found so well adapted to our personal requirements, that we deem them really beautiful. On the other hand, it is not uncommon to meet with people who are physically beautiful, but whose qualities of mind or heart are such as to quite destroy the effect of their beauty on their acquaintances. Beauty is actually there, for in form and color the adaptation of means to end exists, but we feel that this adaptation is to a minor purpose, and that the more important harmonies are wanting.

On the same principle, a person may seem beautiful to others and not to us, may indeed be beautiful according to the rules of art, yet not according to our taste. Adaptation to the ordinary rules of art may not include adaptation to some sense within us, and we can but say of such a person, as Benedick says of Hero: "Only this commen-

dation I can afford her, that were she other than she is, she were unhandsome ; and being no other but as she is, I do not like her."

We see, then, that beauty is not a matter intrinsically of form and color, but of harmony and effect. And it is within the reach of all who will consider the design of their being, and pay a just regard to the harmonious development of the parts and functions with which they are endowed. Some are more gifted in this respect than others. Some are born with elements of beauty that others can never possess. But all can develop in themselves a far higher beauty than that with which they are born, just as strength may be developed by all, although some are from birth stronger than others. Like strength, too, beauty thus developed, in an individual originally having little of it, often exceeds great natural beauty that has not been developed.

Nor are the means of development much dissimilar as regards beauty and strength. Perfection in either can be reached only

through a harmonious and symmetrical development of the entire being, physical, mental, and moral. The slightest deviation from strict health in any part is a detriment to either. The highest type of physical beauty is always a type of perfect health, and every item in the elements of such beauty will be found, on careful examination, to represent the most perfect adaptation of some part of the system to the use for which nature designed it.

It is doubtless true that conventional ideas of beauty require, at various times, various deviations from the type of perfect health. For example, at one time the fashionable idea of female beauty may require a certain paleness of the face and hands. But this is in consequence of the idea that a high or dark color of the skin indicates that in the development of the purely physical nature the intellectual and æsthetic requirements have been slighted; so that, although the idea is a mistaken one, it is based on a supposed adaptation to a very important purpose. So is it with all the fashions that from time

to time, and in varying places, make more or less absurd rules of beauty. Absurd though they may be, they all have their origin in some real or imagined adaptation to ends in themselves desirable.

Individual taste may indeed be so depraved and perverted, that an object to be adapted to that taste must be intrinsically bad, and therefore only hideous things can seem beautiful to its possessor. It is possible, too, and instances have undoubtedly occurred, that such depraved taste may be transmitted from one person to another, or to a community, yet this is not so common a mode as the former, of the introduction of depraved fashions relating to beauty, at least in civilized communities.

For the development of personal beauty, then, it is evident that the only reasonable and successful course is the use of all those hygienic measures which are necessary to secure a healthy action of every part.

Two considerations here are important. The first is, that the effect of beauty will be defeated if there is a seeming want of adapta-

tion, even though there be no real want. It is a principle in architecture that no projecting or overhanging part of a building should be without *apparent* support, no matter how secure it may really be. The reason is, that it gives to the beholder a sense of insecurity, and so, seeming to want adaptation to the purpose for which it was designed, its beauty is defective. On this principle we put brackets under a shelf, even though they may not be needed for support, or may not really afford support, and thus add to its beauty, or, rather, thus bring out its beauty. It would be unbeautiful without the brackets, although, in fact, as well adapted to its use without as with them. So a person, whose symmetry of form and feature and perfect complexion indicate the most perfect adaptation of every power of body to its appropriate exercise, may be made to appear clumsy in form, and sickly-hued by an ill-shaped and badly colored dress, or by other unfortunate surroundings. These matters belong to the department of art, yet, since they affect so closely beauty of person, which is dependent

on hygienic rules and practice, an allusion to them is warranted.

The second consideration is that beauty has many different elements and many different forms, and, while it is very rare to find all the elements of beauty united in one person, it is still more rare to find a person who has none. Often a single beautiful feature redeems and renders attractive a face that is otherwise plain. Sometimes a person has no beauty of feature, yet a fine complexion, a shapely hand, an elegant form, or some peculiar grace of motion or manner, charms the beholder. It is the same with beauty of the mind. Few minds are symmetrically beautiful. Some persons are very dull talkers, but exquisite writers. Others are very commonplace writers, and brilliant talkers. An excellent wit may be a poor mathematician. A great poet may not be a good logician. One may have no aptitude for the natural sciences, and yet be a splendid musician or a fine artist. Again, in both body and mind there may be different styles of beauty. We may have the dark and the fair, the tall and

the *petite*, the slender and lithe and the full-formed, the grave and the piquant, the majestic and the vivacious, the serene and the brilliant, all beautiful after their kind, because all adapted to certain ends.

Very many make the mistake of trying to be what they are not, and can never be, instead of making the most of what they are. It seems a very common thing for us to overlook or disprize the elements of beauty that rightfully belong to us, and to make ourselves unattractive and absurd, by dressing our bodies or minds with such adornments as are only suited to some person of different mold.

Another common fallacy is to attempt to remedy some known defect of body or mind by means that only render it more apparent and glaring, as when one loads the fingers of a large and coarse hand with flashing rings, or when a dull-witted person entertains a company with a stumbling rehearsal of vapid jokes. If there exists an unavoidable defect from any cause, it is best to leave that defect to itself, and develop the possible beauty that

is elsewhere inherent. If one has a club-foot, it is not desirable to make it conspicuous by unsuccessful attempts to improve its appearance. It is much better to so care for the symmetrical members that they shall impress the beholder pleasantly, while the foot attracts little or no attention, and thus the whole effect is one of beauty. So with any other defect. Few are without some serious one, but there is always some special grace of body or mind, or some combination of such graces, that may be so cultivated as to withdraw attention from the defects, and produce only the effect of beauty.

This may be called an economy of forces, and the principle is applicable to all exercises of power. It is not possible for any one to do everything for which the human frame is adapted. It is not even possible for any one person in the course of a life-time to do all the things for which that person is adapted. It is necessary for us to choose, from the many things that we might do well, that which we can do best, or which we would rather do (commonly, but not always, the

same thing), or that which from the force of circumstances we must do ; and in bending our energies to that, and making the use of it, while we leave other works to our workers, we shall find our greatest usefulness and our fullest happiness.

CHAPTER IX.

HYGIENIC MORALS.

MORAL purity in woman is so essential to her own happiness, and the welfare of all with whom she associates, indeed, of the whole world, that its absence involves the greatest degradation of which a woman is capable. It is not within the purpose of this work to discuss the reasons why civilized society is in this respect more strict toward women than toward men. Of course, it is as much the duty of men as of women to lead pure lives, and the men who do not are as verily guilty as the women who do not, and are so considered by all sincere and thoughtful people; yet, whatever reasons may underlie it, the fact remains that the consequences of failure in this are much more dreadful to women than to men. The slightest breath of

suspicion on a woman's chastity, the least taint even of immodesty, disgraces her beyond recovery.

And no true woman would be willing to have it otherwise. The general instinct and habits of thought and feeling are nicer in woman than in man, and to the mind of a virtuous woman no line of separation can be too deeply marked between the pure and the impure. To cross that line would seem to her equally horrible and impossible. Yet all those who now stand on the shameful side of the line once stood on the other side, and many of them grew up to womanhood without an impure thought; and, if they had then thought about the subject at all, would have deemed it as impossible that they could ever become the outcasts they now are, as that horns should grow on their heads and hoofs on their feet. No girl or woman can securely say to herself, "I shall never fall." Daily some are falling, and it is as certain that some who this year are secure in innocence will next year be dishonored and lost, as it is that some men who are now sober

will some day be drunkards. Many even now stand unconsciously upon the brink of an abyss of shame, which, if they saw, they would turn from with horror.

There are some whose surroundings from infancy are so depraved, or whose moral sense is so perverted, that they can hardly have any conception of purity, or know more than the beasts do of virtue. We shudder at the darkness of their fate, which seems to be by the force of circumstances fixed beyond hope. But there are others whose lives are so far above any impurity that they can hardly conceive of such a thing, and yet who, if they fall, will but add to the many examples of those whose freedom from the knowledge of evil has been the cause of their falling therein. To such, a word of warning may not be vain.

Impurity of thought is inconsistent with purity of life. In the consideration of habit and association we have seen how constantly thoughts or ideas may induce actions that we can not control. No girl, therefore, who desires to live a modest life, is safe in har-

boring thoughts that for their indelicacy she would be ashamed to have known to her mother or any other pure-minded woman.

It is not needful to enlarge on this point, for no chaste girl will deliberately indulge such thoughts. But they may be forced on her consciousness. There exists in all the higher animals, including man, a passion that springs from the relation between the sexes. It is natural and necessary that there should be such a passion, and its exercise, with certain restrictions, is entirely proper. Yet, like other useful things, it is liable to abuse. Some persons are much more subject to its influence than others, and find it needful to exercise great self-control at times, to keep the mind from dwelling on improper themes. One of the best means of preventing this is to fill the mind full of something else.

It has been said that hunting and hard study are among the occupations most likely to repress sexual desire. Probably the principal reason for this is that they are among the occupations which most fully interest

those who are devoted to them, and most fully occupy their time, attention, and energy. Any other occupation fulfilling these conditions will be found useful in the same way, whereas idleness is an inveterate foe to virtue.

Early rising is, on the same principle, an aid. By early rising in this connection, however, is not meant the practice of rising before the natural amount of sleep has been had, but simply rising at the moment of waking from sleep. If there is any tendency to impure thoughts, every moment that is spent in bed and not needed for sleep is a direct temptation to indulge them. Not all will need to observe this caution, at least for this reason, for many are happily so free from such tendency that their waking hours in bed will be filled with other thoughts.

There is, however, a source, of contamination against which none is secure. That is, a certain kind of reading. In many hotels and public conveyances, on the streets, and in other public places, certain books and periodicals that are foul with obscenity, and yet

skillfully kept just within the pale of the law defining obscenity, are thrust before the eyes of everybody. Repulsive as they are to every person of refinement, one can not repeatedly meet their suggestions without losing something of that refinement. Yet these are by no means the most dangerous forms of literature, for their easily recognized character quickly prompts us to avoid them, as a danger-flag warns us to turn from some loathed infection. There are other publications, chiefly works of fiction, though found to some extent in most departments of literature, and of every degree of literary merit and power to please, that convey impure impressions so insidiously that we are not aware of the mischief until it has been done, nor always then.

Many works of the latter class are not excluded from polite literature. Some of them are described as a little free, or simply unconventional in their treatment of certain subjects, and it is often said of them that, while a social system based upon the ideas which they contain might not be desirable, they are

profitable for entertainment, and are not likely to turn one's sober judgment to evil.

This may be true, and yet they may be pernicious. It is not necessary to turn one's sober judgment in order to influence one for evil. We have seen how unconscious ideas may be formed, how ideas induce habits, how habits influence beliefs, how close the sympathetic relation is between the moral, mental, and physical natures, and how readily an impression of any kind acting on one of these natures may affect the others, whether we will it or not. Our only safety, then, is in entirely avoiding such works.

We may read only to condemn, but even then the familiarity we acquire with objectionable subjects does us harm. And, for reasons alluded to in speaking of habit, this harm is necessarily much greater in the case of young people than of the middle-aged. It is manifestly desirable, therefore, that young people should read only that which older competent critics pronounce wholesome. And this restriction should not be considered as indicating a want of perception or judgment,

or even of maturity on the part of the young, but simply as a safeguard for them against evils which, for physiological reasons, are more liable to affect them than others. It would indeed be better if no one need read these works, but some must read for the purpose of discrimination, just as some must deal with contagion in order to guard the public against it, and in either case it is best that those shall do the work who are least liable to suffer from it.

Medical advertisements constitute another division of this class of literature. Such advertisements appear in every conceivable place and form. Some stand conspicuously on wayside walls and posts, or mar the beauty of nature by staring at the beholder from rocks and trees. Some disfigure the pages of otherwise respectable newspapers and magazines, and even of some religious journals. Some are distributed in the form of tracts, pictorial cards, etc., and others are more pretentiously made up into pamphlets or even substantially bound volumes, at one time combined with useful information and humor, in the form of

a so-called almanac, at another offering a treatise on certain functions of the human body, and the abuses or disorders of these functions.

Most of the last-named style, and many of some others, profess to originate in the purest and most praiseworthy motives. All of them have one real object, namely, to procure the sale of certain medicines or other substances, or to lead people to seek the advice of the advertisers for real or imagined diseases. Reputable physicians never advertise their medicines or their cures; therefore, every one who responds in any way to such an advertisement may be sure of falling into the hands of some unprincipled person.

But beyond this the mere reading of such advertisements is hurtful, for it is liable in some cases to induce, through the influence of imagination and sympathy, the symptoms described. The advertisers are generally well aware of this, and many of the advertisements are artfully arranged to call attention especially to such symptoms of disease as

may readily be thus induced, or at least imagined to exist.

For all of these reasons, it is a wise rule never to read a medical advertisement, if it can be avoided.

But the worst and most dangerous of all medical advertisements are those which do not at first appear to be advertisements at all, but profess to be scientific treatises on marriage, the relations of the sexes, and certain forms of immorality. They commonly assume a high moral tone, but their true character is such that no one who is acquainted with it would like to be seen reading them. They appeal to an immodest curiosity, and are directly calculated to rouse unclean desires and thoughts. Many are led to read them, innocently, through ignorance of their evil character, and a sincere desire for knowledge, and bitterly repent it afterward.

It occasionally happens that immodest thoughts are induced through reflex action, by disease of some of the organs peculiar to women. The fact that this *may* happen is sufficient reason, even if no other existed,

why any disorder of these organs should be made at once the subject of competent medical advice. On the other hand, the facts just stated show how vitally important it is, in any such case, to avoid the use of any nostrum or advertised remedy. It is almost equally important in these cases to avoid using so-called domestic remedies, or medicines and modes of treatment that are recommended by one woman to another without the special direction of a physician. This is often done under the idea that what has benefited one person will benefit another who has similar symptoms. But many very different disorders of this class have quite similar symptoms, and no woman who has not a thorough medical education is capable of distinguishing between them; while, to use the remedies suitable for one, may be to bring about the very result we dread in another, seemingly similar case. In *all* such cases, whether apparently grave or not, the family physician should be frankly consulted if there is one, and, if not, some physician of known character and ability.

Another frequent cause of impurity exists

in the social relations between girls and young men. It is altogether profitable and pleasant that they should be much in one another's society. The natural passion of one sex for the other is an element of the enjoyment in this association. This, too, is as it should be, yet it may be that this passion will escape control, and end in evil. Leaving out of view those cases of perverted moral nature in which the passion is deliberately made to minister to a base purpose, as being unworthy the consideration of the readers of these pages, let us look at the way in which it may work harm to those who have no intention of harm.

Every girl should remember that, while she is endowed with reason and will, she is also endowed with powers independent of reason and will. In other words, while she has, to a large extent, control over her own acts, she is only her own mistress so long as her acts are limited to the direct influence of reason. Sensations and desires are not within the influence of reason, nor controlled by will. We can not satisfy hunger, when once it is roused,

by any effort of will. We can withhold food by an effort of will, and the hunger will remain unsatisfied.

But there are some appetites that, when fully roused, paralyze the will, and control the whole being, so that, unlike the appetite for food, it is impossible to withhold from them the object of their desire. Of course, all these desires are of reflex origin. They are excited by impressions received from different sources, and in different ways, according to the nature of the desires. The only way, then, to restrain the desires, is to avoid the sources of the impressions. The sexual desire is most readily excited by caresses and other acts of personal contact between persons of opposite sexes. Though no harm is intended by either party to these acts of endearment or sportiveness, they are liable to bring about gradually, and perhaps unconsciously, a condition in which a moment arrives when the reason and will of both persons are suddenly overwhelmed by fierce lust, and two lives are for ever disgraced. For this reason, no young woman should ever permit caresses or other

personal liberties, especially in private, to pass between her and any man other than her father or brother, or one to whom she has intrusted her person and honor for all time.

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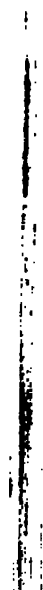
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